

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has become effective by rule of the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus do not constitute an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 2, 2019

PROSPECTUS SUPPLEMENT  
(To Prospectus dated December 2, 2019)

**4,000,000 Shares**



**Common Stock**

We are offering 4,000,000 shares of our common stock. Our common stock is currently listed on The Nasdaq Global Select Market under the symbol "ARWR." On November 29, 2019, the last reported sale price of our common stock on The Nasdaq Global Select Market was \$73.01 per share.

Investing in our common stock involves a high degree of risk. Please read "[Risk Factors](#)" beginning on page S-6 of this prospectus supplement and in the documents incorporated by reference or deemed to be incorporated by reference into this prospectus supplement and the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public offering price	\$	\$
Underwriting discounts and commissions (1)	\$	\$
Proceeds to Arrowhead Pharmaceuticals, Inc., before expenses	\$	\$

- (1) We refer you to "Underwriting" beginning on page S-9 of this prospectus supplement for additional information regarding underwriting compensation.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional 600,000 shares of our common stock from us at the price to the public less underwriting discounts and commissions. See "Underwriting" beginning on page S-9 of this prospectus supplement for more information.

Delivery of the shares of our common stock is expected to be made on or about December , 2019.

*Book-Running Managers*

*Passive Bookrunner*

**Goldman Sachs & Co. LLC**

**Jefferies**

**Piper Jaffray**

**Cantor**

*Co-Managers*

**Baird**

**B. Riley FBR**

Prospectus Supplement dated December , 2019.

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**PROSPECTUS**

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We have not, and the underwriters have not, authorized anyone to provide you with any information other than the information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, and in any free writing prospectus that we have authorized for use in connection with this offering. We take no responsibility for, and can provide no assurances as to the reliability of, any information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of the prospectus supplement and the accompanying prospectus entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

## ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the “SEC,” using a “shelf” registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents dated prior to the date of this prospectus supplement and incorporated by reference herein or therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference herein and therein.

In this prospectus supplement, “Arrowhead,” the “Company,” “we,” “us,” and “our” and similar terms refer to Arrowhead Pharmaceuticals, Inc. and its subsidiaries, unless the context indicates otherwise. References to our “common stock” refer to the common stock, par value \$0.001 per share, of Arrowhead Pharmaceuticals, Inc.

All references in this prospectus supplement to our financial statements include, unless the context indicates otherwise, the related notes.

The industry and market data and other statistical information contained in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein are based on management’s own estimates, independent publications, government publications, reports by market research firms or other published independent sources, and, in each case, are believed by management to be reasonable estimates. Although we believe these sources are reliable, we have not independently verified the information.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain or incorporate by reference forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the “Securities Act,” and Section 21E of the Securities Exchange Act of 1934, as amended, or the “Securities Exchange Act,” and we intend that such forward-looking statements be subject to the safe harbors contained in the Private Securities Litigation Reform Act of 1995. Readers are cautioned that our actual results may differ materially from those discussed in the forward-looking statements. These forward-looking statements include, without limitation, statements regarding the progress and timing of our clinical trials, the safety and efficacy of our product candidates, the goals of our development activities, estimates of the potential markets for our product candidates, our projected cash needs and our expected future revenues, operations and expenditures. You can identify forward-looking statements by the use of the words “believe,” “expect,” “anticipate,” “intend,” “estimate,” “project,” “will,” “should,” “may,” “plan,” “intend,” “assume,” “continue” and other expressions which predict or indicate future events and trends and which do not relate solely to historical matters. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. These risks and uncertainties include, among others:

- risks relating to the cost, timing, scope and results of ongoing safety and efficacy trials of our drug candidates;
- risks inherent in attempting to commercialize new drugs;
- risks relating to the development of drugs with a short development history, such as our compounds based on our Targeted RNAi Molecule (TRiM™) platform, and related uncertainty as to safety and efficacy of these drug candidates;
- risks relating to our ability to enter into revenue-generating collaborations or to achieve commercial acceptance of our drug candidates, if approved;
- risks relating to our financial condition and our future capital requirements to complete development of our existing drug candidates and to develop other drug candidates;
- risks relating to the validity and enforceability of our patents and potential litigation relating to intellectual property rights;
- risks relating to our reliance on third parties;
- risks relating to the volatility of our stock price; and
- other factors detailed from time to time in filings with the SEC.

In addition, the factors described under the section captioned “Risk Factors” in this prospectus supplement and the accompanying prospectus, as may be updated from time to time by our future filings under Securities Exchange Act and elsewhere in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, may result in these differences. You should carefully review all of these factors. These forward-looking statements were based on information, plans and estimates at the date of this prospectus supplement or the other document containing the forward-looking statement, and we assume no obligation to update any forward-looking statements to reflect changes in underlying assumptions or factors, new information, future events or other changes, except as may be required by law.

## PROSPECTUS SUMMARY

*The following summary of our business highlights certain of the information contained elsewhere in or incorporated by reference into this prospectus supplement and the accompanying prospectus. Because this is only a summary, however, it does not contain all of the information that may be important to you. You should carefully read this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference, which are described under “Incorporation of Certain Information by Reference” and “Where You Can Find More Information” in this prospectus supplement and the accompanying prospectus. You should also carefully consider the matters discussed in the section in this prospectus supplement titled “Risk Factors” and in the accompanying prospectus and in other periodic reports incorporated herein by reference.*

### Our Company

We are a biopharmaceutical company developing medicines that treat intractable diseases by silencing the genes that cause them. Using a broad portfolio of RNA chemistries and efficient modes of delivery, our therapies trigger the RNA interference mechanism to induce rapid, deep and durable knockdown of target genes. RNA interference, or RNAi, is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Deemed to be one of the most important recent discoveries in life science with the potential to transform medicine, the discoverers of RNAi were awarded a Nobel Prize in 2006 for their work. Our RNAi-based therapeutics leverage this natural pathway of gene silencing.

### Pipeline Overview

We are focused on developing innovative drugs for diseases with a genetic basis, typically characterized by the overproduction of one or more proteins that are involved with disease. The depth and versatility of our RNAi technologies enable us to potentially address conditions in virtually any therapeutic area and pursue disease targets that are not otherwise addressable by small molecules and biologics. We are leading the field in bringing the promise of RNAi to address diseases outside of the liver, and our pipeline now includes disease targets in the liver, lung, and solid tumors.

- ARO-AAT is an RNAi therapeutic candidate for the treatment of liver disease associated with alpha-1 antitrypsin deficiency. ARO-AAT is designed to knock down the Alpha-1 antitrypsin (AAT) gene transcript and reduce the hepatic production of the mutant Z-AAT protein. We completed AROAAT1001, a Phase 1 randomized, double-blind, placebo controlled single-ascending dose and multiple-ascending dose study to evaluate the safety, tolerability, pharmacokinetics, and effect of subcutaneous doses of ARO-AAT on serum alpha-1 antitrypsin levels in healthy adult volunteers in 2018. We are currently investigating ARO-AAT in two clinical studies:
  1. SEQUOIA (AROAT2001), which is a potentially pivotal multi-center, multi-dose, placebo-controlled, adaptive Phase 2/3 study to evaluate the safety, efficacy and tolerability of ARO-AAT, administered subcutaneously to patients with alpha-1 antitrypsin deficiency.
  2. AROAAT2002, which is a pilot open-label, multi-dose, Phase 2 study to assess changes in a novel histological activity scale in response to ARO-AAT over time in patients with alpha-1 antitrypsin deficiency associated liver disease.In June 2019, Arrowhead received Fast Track Designation for ARO-AAT from the U.S. Food and Drug Administration, or “FDA,” for the treatment of AAT deficiency associated liver disease.
- ARO-APOC3 is designed to reduce production of Apolipoprotein C-III (apoC-III), a component of triglyceride rich lipoproteins (TRLs) including VLDL and chylomicrons and a key regulator of triglyceride metabolism. We believe that knocking down the hepatic production of apoC-III may result in reduced VLDL synthesis and assembly, enhanced breakdown of TRLs, and better clearance of VLDL and chylomicron remnants. A Clinical Trial Application, or “CTA,” was filed in January 2019. We received Orphan Drug Designation from the FDA for ARO-APOC3 for the treatment of familial chylomicronemia syndrome in June 2019. We are currently investigating ARO-APOC3 in a Phase 1 clinical trial.

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- ARO-ANG3 is designed to reduce production of angiopoietin-like protein 3 (ANGPTL3), a liver synthesized inhibitor of lipoprotein lipase and endothelial lipase. ANGPTL3 inhibition has been shown to lower serum LDL, serum and liver triglyceride and has genetic validation as a novel target for cardiovascular disease. A CTA was filed in the December 2018. We received Orphan Drug Designation from the FDA for ARO-ANG3 for the treatment of homozygous familial hypercholesterolemia in July 2019. We are currently investigating ARO-ANG3 in a Phase 1 clinical trial.
- ARO-HSD is designed to reduce production of HSD17B13, a hydroxysteroid dehydrogenase involved in the metabolism of hormones, fatty acids and bile acids. Published human genetic data indicate that a loss of function mutation in HSD17B13 provides strong protection against nonalcoholic steatohepatitis (NASH) cirrhosis and alcoholic hepatitis and cirrhosis. Improvements in NASH and fibrosis were seen with HSD17b13 knockdown in the CDAA diet mouse model, a commonly used NASH model. We expect to file a CTA before calendar year end 2019.
- ARO-ENaC is designed to reduce production of the epithelial sodium channel alpha subunit ( $\alpha$ ENaC) in the airways of the lung. In cystic fibrosis patients, increased ENaC activity contributes to airway dehydration and reduced mucociliary transport. We expect to file a CTA in the first half of calendar year 2020.
- ARO-HIF2 is being developed for the treatment of clear cell renal cell carcinoma (ccRCC). ARO-HIF2 is designed to inhibit the production of HIF-2 $\alpha$ , which has been linked to tumor progression and metastasis in ccRCC. Arrowhead believes it is an attractive target for intervention because over 90% of ccRCC tumors express a mutant form of the Von Hippel-Landau protein that is unable to degrade HIF-2 $\alpha$ , leading to its accumulation during tumor hypoxia and promoting tumor growth. We expect to file a CTA before calendar year end 2019.

### **Partnered Programs**

- JNJ-3989 (formerly ARO-HBV) is being developed in collaboration with Janssen Pharmaceuticals, Inc., who acquired a worldwide, exclusive license in October 2018 to develop and commercialize JNJ3989, to be a potentially curative therapy for patients with chronic hepatitis B virus (HBV) infection, when used in combination with other direct antivirals. JNJ-3989 is a sub-cutaneous, RNAi therapy candidate which is designed to silence all HBV gene products and intervene upstream of the reverse transcription process where current standard-of-care nucleotide and nucleoside analogues act. JNJ-3989 (ARO-HBV) is currently being investigated in multiple Phase 2 clinical trials.
- ARO-JNJ1 is being developed against an undisclosed liver-expressed target as part of Arrowhead's Research Collaboration and Option Agreement with Janssen Pharmaceuticals, Inc.
- AMG 890 (formerly ARO-LPA) is designed to reduce production of apolipoprotein A, a key component of lipoprotein(a), which has been genetically linked with increased risk of cardiovascular diseases, independent of cholesterol and LDL levels. Amgen, Inc. acquired a worldwide, exclusive license in September 2016 to develop and commercialize AMG 890 (ARO-LPA). Amgen Inc. started a Phase 1 clinical study of AMG 890 (ARO-LPA) designed to assess its safety in volunteers and patients with elevated levels of lipoprotein(a) in August 2018. Amgen expects to initiate a Phase 2 study in the first half of calendar year 2020.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "ARWR."

### **Corporate Information**

Our executive offices are located at 177 E. Colorado Blvd., Suite 700, Pasadena CA 91105, and our telephone number is (626) 304-3400. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See "Incorporation of Certain Information by Reference" and "Where You Can Find More Information" on page S-14 of this prospectus supplement.

## THE OFFERING

Common stock we are offering	4,000,000 shares
Common stock to be outstanding immediately after this offering	99,506,271 shares
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to an additional 600,000 shares of our common stock.
Use of proceeds	We intend to use the net proceeds of this offering for general corporate purposes, including working capital, capital expenditures, research and development expenditures and clinical trial expenditures. A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies or for other strategic purposes. See “Use of Proceeds” on page S-7 of this prospectus supplement.
Risk Factors	This investment involves a high degree of risk. You should read the sections entitled “Risk Factors” in this prospectus supplement and accompanying prospectus and our most recent Annual Report on Form 10-K, incorporated by reference herein, for a discussion of factors you should read and consider carefully before investing in our common stock.
The Nasdaq Global Select Market symbol	“ARWR”

The number of shares of our common stock shown above to be outstanding after this offering is based on the 95,506,271 shares outstanding as of September 30, 2019 and excludes:

- 4,773,670 shares of our common stock subject to options outstanding as of September 30, 2019 having a weighted average exercise price of \$8.16 per share; and
- 2,062,833 restricted stock units granted and outstanding under our 2013 Equity Incentive Plan and issued as inducement grants to new employees outside of our equity compensation plans.

If the underwriters’ option to purchase additional shares is exercised in full, we will issue and sell an additional 600,000 shares of our common stock and will have 100,106,271 shares outstanding immediately after the offering.

Except as otherwise noted, all information in this prospectus supplement assumes no exercise of the underwriters’ option to purchase additional shares.

## RISK FACTORS

*An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below and discussed under the section captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended September 30, 2019, which is incorporated by reference in its entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occur, our business, financial condition, results of operations, prospects or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Additionally, we note that we are a development stage company and we have accrued net losses annually since inception. We urge you to consider our likelihood of success and prospects in light of the risks, expenses and difficulties frequently encountered by entities at similar stages of development.*

### **Risks Relating to this Offering**

***We will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds that we receive effectively.***

Although we intend to use the proceeds from this offering principally to support our ongoing and planned clinical development activities as described in the section entitled “Use of Proceeds,” we will retain broad discretion as to the application of the net proceeds and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which we choose to allocate and spend the net proceeds. Moreover, we may use the net proceeds for corporate purposes that may not increase our profitability or our market value.

***If you purchase shares of our common stock in this offering, you will experience immediate dilution.***

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution with respect to the common stock you purchase in this offering. Based on the public offering price of \$      per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$      per share. See “Dilution” on page S-8 of this prospectus supplement.

***Because we do not expect to pay dividends in the foreseeable future, you must rely on stock appreciation for any return on your investment.***

We have paid no cash dividends on our common stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future, and payment of cash dividends, if any, will also depend on our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. Furthermore, we may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends. Accordingly, the success of your investment in our common stock will likely depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which you purchased your shares, and you may not realize a return on your investment in our common stock.



## USE OF PROCEEDS

We estimate that the net proceeds from the sale of the shares of common stock that we are offering will be approximately \$274.3 million or approximately \$315.5 million if the underwriters exercise in full their option to purchase up to additional shares of common stock, based on the assumed public offering price of \$73.01 per share, the last reported sale price of our common stock on The Nasdaq Global Select Market on November 29, 2019, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds of this offering for general corporate purposes, including working capital, capital expenditures, research and development expenditures and clinical trial expenditures. A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies, or for other strategic purposes. Although we have no specific agreements, commitments or understandings with respect to any acquisition, we evaluate acquisition opportunities and engage in related discussions with other companies from time to time. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the application of these proceeds.

Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

## DILUTION

Our net tangible book value as of September 30, 2019 was approximately \$227.0 million, or \$2.38 per share. Net tangible book value per share is determined by subtracting our total liabilities from our total tangible assets and dividing the result by the number of shares of our common stock outstanding as of September 30, 2019. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of our common stock in this offering at the public offering price of \$ \_\_\_\_\_ per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2019 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and immediate dilution in net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing our common stock in this offering. The following table illustrates this dilution on a per share basis:

Public offering price per share	\$ _____
Net tangible book value per share as of September 30, 2019	\$2.38
Increase in net tangible book value per share attributable to this offering	\$ _____
As adjusted net tangible book value per share as of September 30, 2019 after this offering	\$ _____
Dilution per share to new investors purchasing our common stock in this offering	\$ _____

If the underwriters exercise in full their option to purchase up to an additional 600,000 shares of common stock, the as adjusted net tangible book value after this offering would be \$ \_\_\_\_\_ per share, representing an increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and immediate dilution of \$ \_\_\_\_\_ per share to new investors purchasing our common stock in this offering.

The table and figures above are based on the 95,506,271 shares of our common stock outstanding as of September 30, 2019 and excludes:

- 4,773,670 shares of our common stock subject to options outstanding as of September 30, 2019 having a weighted average exercise price of \$8.16 per share; and
- 2,062,833 restricted stock units granted and outstanding under our 2013 Equity Incentive Plan and issued as inducement grants to new employees outside of our equity compensation plans.

**To the extent that outstanding options are exercised or our common stock is issued pursuant to other outstanding commitments, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our existing stockholders.**

## UNDERWRITING

We and the underwriters named below will enter into an underwriting agreement with respect to the shares of our common stock being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares of our common stock indicated in the following table. Goldman Sachs & Co. LLC, Jefferies LLC and Piper Jaffray & Co. are the representatives of the underwriters.

<u>Underwriters</u>	<u>Number of Shares</u>
Goldman Sachs & Co. LLC	
Jefferies LLC	
Piper Jaffray & Co.	
Cantor Fitzgerald & Co.	
Robert W. Baird & Co. Incorporated	
B. Riley FBR, Inc.	
<b>Total</b>	<b><u>4,000,000</u></b>

The underwriters are committed to take and pay for all of the shares of our common stock being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional 600,000 shares of our common stock from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares of our common stock are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase an additional 600,000 shares of our common stock.

<u>Paid by us</u>	<u>No Exercise</u>	<u>Full Exercise</u>
<b>Total</b>		

Shares of our common stock sold by the underwriters to the public will be offered at the public offering price set forth on the cover of this prospectus. Any shares of our common stock sold by the underwriters to securities dealers may be sold at a discount of up to \$ \_\_\_\_\_ per share from the public offering price. The offering of the shares of our common stock by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our executive officers and directors have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their shares of our common stock or securities convertible into or exchangeable for shares of our common stock during the period from the date of this prospectus continuing through the date 90 days after the date of this prospectus, except with the prior written consent of the representatives. This agreement does not apply to any existing employee benefit plans or sales made pursuant to a plan established in accordance with Rule 10b5-1 of the Exchange Act, including the potential sale of shares of our common stock pursuant to a plan established in accordance with Rule 10b5-1 of the Exchange Act for our Chief Executive Officer, Christopher Anzalone (the "Anzalone 10b5-1 Plan"). As part of Dr. Anzalone's long-term incentive compensation, Dr. Anzalone was granted performance-based restricted stock unit ("PRSU") awards, which may be settled for shares of our common stock, to vest in installments upon the Company's achievement of certain milestones, including, among others: (1) the Company achieving and maintaining a \$2 billion market capitalization for at least six months and (2) the Company initiating a study that could be pivotal. The Anzalone 10b5-1 Plan provides, in part, for the sale of 50,000 shares on or after December 2, 2019 provided the stock price is above \$40.00 per share. In addition, the Anzalone 10b5-1 Plan provides, in part, for the sale of 50% of the shares of our common stock received by Dr. Anzalone as a result of any vesting of his PRSU awards for tax considerations. Given that the Company's market capitalization has been maintained at or above \$2 billion for at least six months during the calendar year of 2019 and that the Company has initiated the SEQUOIA study, a potentially pivotal Phase 2/3 Study, we anticipate that the Company's Compensation Committee will certify the vesting of such PRSU awards at its next meeting, currently scheduled for December 6, 2019. Accordingly, up to 50,000 shares of our common stock may be sold pursuant to the Anzalone 10b5-1 Plan on or after December 2, 2019 and an additional approximately 183,000 shares of our common stock may be sold on behalf of Dr. Anzalone pursuant to the Anzalone 10b5-1 Plan on or around December 6, 2019.

Our common stock is currently listed on The Nasdaq Global Select Market under the symbol "ARWR."

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In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A “covered short position” is a short position that is not greater than the amount of additional shares for which the underwriters’ option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. “Naked” short sales are any short sales that create a short position greater than the amount of additional shares of our common stock for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on The Nasdaq Global Select Market, in the over-the-counter market or otherwise.

### ***European Economic Area***

In relation to each Member State of the European Economic Area (each a “Member State”), no common shares (the “Shares”) have been offered or will be offered pursuant to the offering to the public in that Member State prior to the publication of a prospectus in relation to the Shares which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation), except that offers of Shares may be made to the public in that Member State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the Representatives for any such offer ; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Shares shall require the company or any Representative to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to any Shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase or subscribe for any Shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

### ***United Kingdom***

Each Underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (FSMA)) received by it in connection with the issue or sale of the shares in circumstances in which Section 21(1) of the FSMA does not apply to the company; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

### ***Canada***

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this offering memorandum (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

### ***Hong Kong***

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

### ***Singapore***

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

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Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32")

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

### **Japan**

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

The Company estimates that its share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$ . We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to \$20,000.

The Company has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

**LEGAL MATTERS**

Gibson, Dunn & Crutcher LLP of San Francisco, California will issue an opinion with respect to the validity of the issuance of the common stock being offered hereby. Latham & Watkins LLP of San Diego, California is counsel to the underwriters in connection with this offering.

**EXPERTS**

The financial statements of the Company incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended September 30, 2019 have been audited by Rose, Snyder & Jacobs, LLP as stated in their report incorporated by reference in this prospectus supplement and elsewhere in this registration statement, and given upon the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We must comply with the informational requirements of the Exchange Act, and we are required to file reports and proxy statements and other information with the SEC. This prospectus, which forms part of the registration statement, does not contain all of the information included in the registration statement, including its exhibits and schedules. For further information about us and the securities described in this prospectus, you should refer to the registration statement, its exhibits and schedules and our reports, proxies, information statements and other information filed with the SEC. Our filings are available to the public on the Internet, through a database maintained by the SEC at <http://www.sec.gov>. Our filings are also available, free of charge, on our website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

Statements contained in this prospectus supplement as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference in this prospectus supplement the information that we file with it. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus supplement. Later information that we file with the SEC will automatically update and supersede the information in this prospectus supplement, any supplement and the documents listed below. Our SEC file number is 0-21898. We incorporate by reference the specific documents listed below and any future filings made with the SEC under Section 13(a), 13(c), 14, or 15(d) of the Exchange Act, as amended, until all of the shares of common stock covered by this prospectus supplement are sold:

- the Company's Annual Report on [Form 10-K](#) for the fiscal year ended September 30, 2019, filed on November 25, 2019;
- the Company's [Definitive Proxy Statement on Schedule 14A](#), filed on January 25, 2019;
- the Company's Current Report on [Form 8-K](#) filed on November 21, 2019; and
- the description of the Company's Common Stock contained in its registration statement on [Form 8-A/A](#) (Registration No. 000-21898), filed on April 7, 2016, including any amendments or reports filed for the purpose of updating such description.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus supplement, to the extent that a statement contained in or omitted from this prospectus supplement, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement. Nothing in this prospectus supplement shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K.

Upon written or oral request, we will furnish without charge to each person, including any beneficial owner, to whom this prospectus supplement is delivered, upon written or oral request, a copy of any document incorporated by reference. Requests should be addressed to Corporate Secretary, 177 E. Colorado Blvd., Suite 700, Pasadena CA 91105 or may be made telephonically at (626) 304-3400.



Prospectus

# Arrowhead Pharmaceuticals, Inc.

## Common Stock Preferred Stock Debt Securities Warrants

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From time to time, we or any selling stockholder may offer common stock, preferred stock, debt securities, warrants or a combination of any of these securities. The debt securities that we may offer may consist of senior debt securities or subordinated debt securities, in each case consisting of notes or other evidence of indebtedness in one or more series. The warrants that we may offer may consist of warrants to purchase any of the other securities that may be sold under this prospectus. The securities offered under this prospectus may be offered separately, together or in series separate, and in amounts, at prices and on terms to be determined at the time of sale. A prospectus supplement that will set forth the terms of the offering of any securities will accompany this prospectus.

We or any selling stockholder may offer these securities through agents, underwriters or dealers or directly to investors. See “Plan of Distribution” in this prospectus. Each prospectus supplement will provide the amount, price and terms of the plan of distribution relating to the securities to be sold pursuant to such prospectus supplement. We will set forth the names of any underwriters or agents in the accompanying prospectus supplement, as well as the net proceeds we expect to receive from any such sale.

You should read this prospectus, any accompanying prospectus supplement and the documents incorporated by reference in this prospectus and any such prospectus supplement carefully before you invest. This prospectus may not be used to offer or sell any of the common stock, preferred stock, debt securities or warrants unless accompanied by a prospectus supplement.

Our common stock is traded on The Nasdaq Global Select Market under the symbol “ARWR.” On November 29, 2019, the closing sale price of our common stock on The Nasdaq Global Select Market was \$73.01 per share. Our principal executive offices are located at 177 E. Colorado Blvd, Suite 700, Pasadena, California 91105, and our telephone number is (626) 304-3400.

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*Investing in our securities involves a high degree of risk. You should carefully consider the risk and uncertainties referenced under the heading “[Risk Factors](#)” beginning on page 4 of this prospectus as well as those contained in the applicable prospectus supplement and any related free writing prospectus, and in the other documents that are incorporated by referenced into this prospectus or any accompanying prospectus supplement.*

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

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**The date of this prospectus is December 2, 2019**

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Neither we nor any selling stockholder have authorized anyone to provide you with information in addition to or different from that contained in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We take no responsibility for, and can provide no assurances as to the reliability of, any information not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document (unless the information specifically indicates that another date applies) and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security.

## ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement that we filed with the Securities and Exchange Commission (the “SEC”), as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended (the “Securities Act”). Under this shelf registration process, we and/or selling stockholders may offer common stock, preferred stock, debt securities or warrants over time in one or more offerings at prices and on terms to be determined by market conditions at the time of the offering. This prospectus only provides you with a general description of the securities we and/or selling stockholders may offer. Each time we and/or selling stockholders sell any common stock, preferred stock, debt securities or warrants under this prospectus, we will provide a prospectus supplement that will contain more specific information about the securities being offered and the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Each prospectus supplement and any relating free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents incorporated by reference into this prospectus. If there is any inconsistency between the information in this prospectus and any accompanying prospectus supplement or related free writing prospectus, you should rely on the information in the prospectus supplement or any related free writing prospectus we may authorize to be provided to you. This prospectus may not be used to sell any common stock, preferred stock, debt securities or warrants unless accompanied by a prospectus supplement. You should carefully read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the additional information incorporated herein by reference as described under the headings “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this prospectus, before you invest in any of the securities being offered hereby.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus (including the documents incorporated by reference herein) contains certain forward-looking statements within the meaning of federal securities laws, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this prospectus or any document incorporated by reference herein, except for historical information, may be deemed to be forward-looking statements. Without limiting the generality of the foregoing, words such as “may,” “will,” “expect,” “believe,” “anticipate,” “intend,” “could,” “estimate,” or “continue” or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to predict accurately and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1 (Business) and Item 1A (Risk Factors) of Part I and Item 7 (Management’s Discussion and Analysis of Financial Condition and Results of Operations) of Part II of our most recent Annual Report on Form 10-K and in subsequent Quarterly Reports on Form 10-Q, factors described under the section entitled “Risk Factors” in this prospectus, as may be updated from time to time by our future filings under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and elsewhere in the documents incorporated by reference in this prospectus. Readers should carefully review these risks, as well as the additional risks described in other documents we file from time to time with the SEC. 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.

## ABOUT THE COMPANY

*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 its Subsidiaries, (3) the term “Subsidiaries” refers collectively to Arrowhead Madison Inc. (“Arrowhead Madison”), Arrowhead Australia Pty Ltd (“Arrowhead Australia”) and Ablaris Therapeutics, Inc. (“Ablaris”), (4) the term “Common Stock” refers to Arrowhead’s common stock, 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 common stock.*

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, or RNAi, is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Deemed to be one of the most important recent discoveries in life science with the potential to transform medicine, the discoverers of RNAi were awarded a Nobel Prize in 2006 for their work. Arrowhead’s RNAi-based therapeutics leverage this natural pathway of gene silencing. Arrowhead is focused on developing innovative drugs for diseases with a genetic basis, typically characterized by the overproduction of one or more proteins that are involved with disease. The depth and versatility of our RNAi technologies enables us to potentially address conditions in virtually any therapeutic area and pursue disease targets that are not otherwise addressable by small molecules and biologics. Arrowhead is leading the field in bringing the promise of RNAi to address diseases outside of the liver, and our pipeline now includes disease targets in the liver, lung, and solid tumors.

Our principal executive offices are located at 177 E. Colorado Blvd., Suite 700, Pasadena, CA 91105 and our telephone number is (626) 304-3400. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

## **RISK FACTORS**

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described in the sections entitled “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on form 10-Q, as filed with the SEC, which are incorporated herein by reference in their entirety, as well any amendment or updates to our risk factors reflected in subsequent filings with the SEC, including the applicable prospectus supplement. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus. For more information, see the section entitled “Where You Can Find More Information.”

**USE OF PROCEEDS**

We intend to use the net proceeds we receive from the sale of securities by us as set forth in the applicable prospectus supplement. Unless otherwise set forth in a prospectus supplement, we will not receive any proceeds from the sale of securities by any selling stockholder.

## DESCRIPTION OF SECURITIES

### Description of Capital Stock

The following is a description of our common stock and our preferred stock. You should refer to our Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”) and our Amended and Restated Bylaws (the “Bylaws”), which are incorporated by reference into this prospectus. Copies of our Certificate of Incorporation and Bylaws may be obtained as described under the heading “Where You Can Find More Information” in this prospectus.

We are authorized to issue up to 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. As of November 20, 2019, 95,708,027 shares of our common stock were issued and outstanding.

#### **Common Stock**

We may issue shares of our common stock from time to time. Holders of our common stock are entitled to one vote for each share held on each matter to be voted on by stockholders. There is no cumulative voting in the election of directors. The holders of our common stock have no preemptive or conversion rights and are not subject to further calls or assessments. There are no redemption or sinking fund provisions applicable to our common stock. The rights of the holders of our common stock are subject to any rights that may be fixed for holders of preferred stock, if any. Holders of our common stock are entitled to receive ratably dividends out of funds legally available, if and when declared from time to time by our board of directors. In the event of liquidation, dissolution or winding up of the affairs of the Company, holders of our common stock are to share in all assets remaining after the payment of liabilities and any preferential distributions payable to preferred stockholders, if any.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “ARWR”. The transfer agent and registrar for our common stock is Computershare Trust Company.

#### **Preferred Stock**

We may issue shares of our preferred stock from time to time, in one or more series. Under our certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate up to 5,000,000 shares of preferred stock, \$0.001 par value per share, in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon the preferred stock, including but not limited to dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be greater than the rights of our common stock.

If we issue preferred stock, we will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designations relating to that series. If we issue preferred stock, we will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designations that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplement related to any series of preferred stock we may offer, as well as the complete certificate of designations that contains the terms of the applicable series of preferred stock.

#### **Delaware Anti-Takeover Law**

We are subject to Section 203 of the General Corporation Law of the State of Delaware (the “DGCL”). Section 203 of the DGCL generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine whether shares held subject to the plan will be tendered in a tender or exchange offer; or



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- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 of the DGCL defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 of the DGCL defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

## Description of Debt Securities

We may issue debt securities under an indenture to be entered into between us and a trustee chosen by us, qualified to act as such under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”) and appointed under an indenture. The indenture will be governed by the Trust Indenture Act. The paragraphs below describe the general terms and provisions of the debt securities we may issue. When we offer to sell a particular series of debt securities, we will describe the specific terms of the securities in a supplement to this prospectus, including any additional covenants or changes to existing covenants relating to such series.

The following is a summary of the material provisions of the indenture. It does not restate the indenture entirely. We urge you to read the indenture. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and we will file the indenture we enter into and the supplemental indentures or authorizing resolutions with respect to particular series of debt securities as exhibits to current or other reports we file with the SEC. See “Where You Can Find More Information” for information on how to obtain copies of the indentures and the supplemental indentures or authorizing resolutions. You may also inspect copies of the documents for the particular series at the office of the trustee. References below to an “indenture” are references to the applicable indenture, as supplemented, under which a particular series of debt securities is issued.

### *Terms of the Debt Securities*

Our debt securities will be general obligations of Arrowhead. We may issue them in one or more series. Authorizing resolutions or a supplemental indenture will set forth the specific terms of each series of debt securities. We will provide a prospectus supplement for each series of debt securities that will describe:

- the title of the debt securities and whether the debt securities are senior, senior subordinated, or subordinated debt securities;
- the aggregate principal amount of the debt securities and any limit upon the aggregate principal amount of the series of debt securities, and, if the series is to be issued at a discount from its face amount, the method of computing the accretion of such discount;
- the percentage of the principal amount at which debt securities will be issued and, if other than the full principal amount thereof, the percentage of the principal amount of the debt securities that is payable if maturity of the debt securities is accelerated because of a default;
- the date or dates on which principal of the debt securities will be payable and the amount of principal that will be payable;
- the rate or rates (which may be fixed or variable) at which the debt securities will bear interest, if any, or the method of calculation of such rate or rates, as well as the dates from which interest will accrue, the dates on which interest will be payable and the record date for the interest payable on any payment date;
- any collateral securing the performance of our obligations under the debt securities;
- the currency or currencies (including any composite currency) in which principal, premium, if any, and interest, if any, will be payable, and if such payments may be made in a currency other than that in which the debt securities are denominated, the manner for determining such payments, including the time and manner of determining the exchange rate between the currency in which such securities are denominated and the currency in which such securities or any of them may be paid, and any additions to, modifications of or deletions from the terms of the debt securities to provide for or to facilitate the issuance of debt securities denominated or payable in a currency other than U.S. dollars;
- the place or places where principal, premium, if any, and interest, if any, on the debt securities will be payable and where debt securities that are in registered form can be presented for registration of transfer or exchange;
- the denominations in which the debt securities will be issuable, if different from \$2,000 and multiples of \$1,000 in excess thereof;
- any provisions regarding our right to redeem or purchase debt securities or the right of holders to require us to redeem or purchase debt securities;

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- the right, if any, of holders of the debt securities to convert or exchange them into our common stock or other securities of any kind of us or another obligor, including any provisions intended to prevent dilution of the conversion rights and, if so, the terms and conditions upon which such securities will be so convertible or exchangeable, including the initial conversion or exchange price or rate or the method of calculation, how and when the conversion price or exchange ratio may be adjusted, whether conversion or exchange is mandatory, at the option of the holder or at our option, the conversion or exchange period, and any other provision in relation thereto;
- any provisions requiring or permitting us to make payments to a sinking fund to be used to redeem debt securities or a purchase fund to be used to purchase debt securities;
- the terms, if any, upon which debt securities may be senior or subordinated to our other indebtedness;
- any additions to, modifications of or deletions from the terms of the debt securities with respect to events of default or covenants or other provisions set forth in the indenture for the series to which the supplemental indenture or authorizing resolution relates;
- whether and upon what terms the debt securities of such series may be defeased or discharged, if different from the provisions set forth in the indenture for the series to which the supplemental indenture or authorizing resolution relates;
- whether the debt securities will be issued in registered or bearer form and the terms of these forms;
- whether the debt securities will be issued in whole or in part in the form of a global security and, if applicable, the identity of the depositary for such global security;
- any provision for electronic issuance of the debt securities or issuance of the debt securities in uncertificated form; and
- any other material terms of the debt securities, which may be different from the terms set forth in this prospectus.

The applicable prospectus supplement will also describe any material covenants to which a series of debt securities will be subject and the applicability of those covenants to any of our subsidiaries to be restricted thereby, which are referred to herein as “restricted subsidiaries.” The applicable prospectus supplement will also describe provisions for restricted subsidiaries to cease to be restricted by those covenants.

### ***Events of Default and Remedies***

Unless otherwise described in the applicable prospectus supplement, an event of default with respect to any series of debt securities will be defined in the indenture or applicable supplemental indenture or authorizing resolution as being:

- our failure to pay interest on any debt security of such series when the same becomes due and payable and the continuance of any such failure for a period of 30 days;
- our failure to pay the principal or premium of any debt security of such series when the same becomes due and payable at maturity, upon acceleration, redemption or otherwise;
- our failure or the failure of any restricted subsidiary to comply with any of its agreements or covenants in, or provisions of, the debt securities of such series or the indenture (as they relate thereto) and such failure continues for a period of 60 days after our receipt of notice of the default from the trustee or from the holders of at least 25% in aggregate principal amount of the then outstanding debt securities of that series (except in the case of a default with respect to the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of the assets of us (or any other provision specified in the applicable supplemental indenture or authorizing resolution), which will constitute an event of default with notice but without passage of time);
- default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness (other than non-recourse indebtedness, as defined in the indenture) for money borrowed by us or any of our restricted subsidiaries (or the payment of which is guaranteed by us or any of our restricted subsidiaries), whether such indebtedness or guarantee now exists or is created after the date we issue debt securities, if that default:
  - (a) is caused by a failure to pay at final stated maturity the principal amount of such indebtedness prior to the expiration of the grace period provided in such indebtedness on the date of such default (a “Payment Default”); or

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- (b) results in the acceleration of such indebtedness prior to its express maturity without such indebtedness having been discharged or such acceleration having been cured, waived, rescinded or annulled for the period and after the notice had been provided, and, in each case, the principal amount of any such indebtedness, together with the principal amount of any other such indebtedness under which there has been a Payment Default or the maturity of which has been so accelerated, aggregates \$50 million or more; or
- certain events of bankruptcy, insolvency or reorganization occur with respect to us or any restricted subsidiary that is a significant subsidiary (as defined in the indenture).

The indenture will provide that the trustee may withhold notice to the holders of any series of debt securities of any default, except a default in payment of principal or interest, if any, with respect to such series of debt securities, if the trustee considers it in the interest of the holders of such series of debt securities to do so.

The indenture will provide that if any event of default has occurred and is continuing with respect to any series of debt securities, the trustee or the holders of not less than 25% in principal amount of such series of debt securities then outstanding may declare the principal of all the debt securities of such series to be due and payable immediately. However, the holders of a majority in principal amount of the debt securities of such series then outstanding by notice to the trustee may waive any existing default and its consequences with respect to such series of debt securities, other than any event of default in payment of principal or interest. Holders of a majority in principal amount of the then outstanding debt securities of any series may rescind an acceleration with respect to such series and its consequences, except an acceleration due to nonpayment of principal or interest on such series, if the rescission would not conflict with any judgment or decree and if all existing events of default with respect to such series have been cured or waived.

The holders of a majority of the outstanding principal amount of the debt securities of any series will have the right to direct the time, method and place of conducting any proceedings for any remedy available to the trustee with respect to such series, subject to limitations specified in the indenture.

### ***Defeasance***

The indenture will permit us to terminate all our respective obligations under the indenture as they relate to any particular series of debt securities, other than the obligation to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal of and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

The indenture will also permit us to terminate all of our respective obligations under the indenture as they relate to any particular series of debt securities, including the obligations to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that (A) we have received from, or there has been published by, the Internal Revenue Service a ruling, or (B) since the date such series of debt securities were originally issued, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel shall state that, holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

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In addition, the indenture will permit us to terminate substantially all our respective obligations under the indenture as they relate to a particular series of debt securities by depositing with the trustee money or government obligations sufficient to pay all principal and interest on such series at its maturity or redemption date if the debt securities of such series will become due and payable at maturity within one year or are to be called for redemption within one year of the deposit.

### ***Transfer and Exchange***

A holder will be able to transfer or exchange debt securities only in accordance with the indenture. The registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents, and to pay any taxes and fees required by law or permitted by the indenture.

### ***Amendment, Supplement and Waiver***

Without notice to or the consent of any holder, we and the trustee may amend or supplement the indenture or the debt securities of a series to:

- cure any ambiguity, omission, defect or inconsistency;
- comply with the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of our assets;
- provide that specific provisions of the indenture shall not apply to a series of debt securities not previously issued or to make a change to specific provisions of the indenture that only applies to any series of debt securities not previously issued or to additional debt securities of a series not previously issued;
- create a series and establish its terms;
- provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- add a guarantor subsidiary in respect of any series of debt securities;
- secure any series of debt securities;
- comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act;
- make any change that does not adversely affect the rights of any holder; or
- conform the provisions of the indenture to the final offering document in respect of any series of debt securities.

With the exceptions discussed below, we and the trustee may amend or supplement the indenture or the debt securities of a particular series with the written consent of the holders of at least a majority in principal amount of the debt securities of such series then outstanding. In addition, the holders of a majority in principal amount of the debt securities of such series then outstanding may waive any existing default under, or compliance with, any provision of the debt securities of a particular series or of the indenture relating to a particular series of debt securities, other than any event of default in payment of interest or principal. These consents and waivers may be obtained in connection with a purchase of, or tender offer or exchange offer for, debt securities.

Without the consent of each holder affected, we and the trustee may not:

- reduce the amount of debt securities of such series whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest, including defaulted interest;
- reduce the principal of or extend the fixed maturity of any debt security or alter the provisions with respect to redemptions or mandatory offers to repurchase debt securities;
- make any change that adversely affects any right of a holder to convert or exchange any debt security into or for shares of our common stock or other securities, cash or other property in accordance with the terms of such security;
- modify the ranking or priority of the debt securities;

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- make any change to any provision of the indenture relating to the waiver of existing defaults, the rights of holders to receive payment of principal and interest on the debt securities, or to the provisions regarding amending or supplementing the indenture or the debt securities of a particular series with the written consent of the holders of such series;
- waive a continuing default or event of default in the payment of principal of or interest on the debt securities; or
- make any debt security payable at a place or in money other than that stated in the debt security, or impair the right of any holder of a debt security to bring suit as permitted by the indenture.

The right of any holder to participate in any consent required or sought pursuant to any provision of the indenture, and our obligation to obtain any such consent otherwise required from such holder, may be subject to the requirement that such holder shall have been the holder of record of debt securities with respect to which such consent is required or sought as of a record date fixed by us in accordance with the indenture.

### ***Concerning the Trustee***

The indenture will contain limitations on the rights of the trustee, should it become our creditor, to obtain payment of claims in specified cases or to realize on property received in respect of any such claim as security or otherwise. The indenture will permit the trustee to engage in other transactions; however, if it acquires any conflicting interest, it must eliminate such conflict or resign.

The indenture will provide that in case an event of default occurs and is not cured, the trustee will be required, in the exercise of its power, to use the degree of care of a prudent person in similar circumstances in the conduct of such person's own affairs. The trustee shall be under no obligation to exercise any of the rights or powers vested in it by the indenture at the request or direction of any of the holders pursuant to the Indenture, unless such holders shall have offered to the trustee security or indemnity satisfactory to the trustee against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

### ***No Recourse against Others***

The indenture will provide that a director, officer, employee or stockholder, as such, of the Company shall not have any liability for any obligations of the Company under the debt securities or the indenture or for any claim based on, in respect of or by reason of, such obligations or their creation.

### ***Governing Law***

The laws of the State of New York will govern the indenture and the debt securities.

## Description of Warrants

### *General Description of Warrants*

We may issue warrants for the purchase of debt securities, common stock, preferred stock or any combination of these securities. Warrants may be issued independently or together with other securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between a warrant agent and us. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. The following outlines some of the general terms and provisions of the warrants that we may issue from time to time. Additional terms of the warrants and the applicable warrant agreement will be set forth in the applicable prospectus supplement. The following description, and any description of the warrants included in a prospectus supplement, may not be complete and is subject to and qualified in its entirety by reference to the terms and provisions of the applicable warrant agreement, which we will file with the SEC in connection with any offering of warrants.

### *Debt Warrants*

The prospectus supplement relating to a particular issue of warrants exercisable for debt securities will describe the terms of those warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of the warrants;
- the designation and terms of the debt securities purchasable upon exercise of the warrants;
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the principal amount and price of debt securities that may be purchased upon exercise of a warrant;
- the dates on which the right to exercise the warrants commences and expires;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- whether the warrants represented by the warrant certificates or debt securities that may be issued upon exercise of the warrants will be issued in registered or bearer form;
- information relating to book-entry procedures, if any;
- if applicable, a discussion of material U.S. federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

### *Stock Warrants*

The prospectus supplement relating to a particular issue of warrants exercisable for common stock or preferred stock will describe the terms of the common stock warrants and preferred stock warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of the warrants;

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- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares and price of common stock or preferred stock that may be purchased upon exercise of a warrant;
- the dates on which the right to exercise the warrants commences and expires;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- if applicable, a discussion of material U.S. federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

### ***Exercise of Warrants***

Each warrant will entitle the holder of the warrant to purchase at the exercise price set forth in the applicable prospectus supplement the principal amount of debt securities or shares of common stock or preferred stock being offered. Holders may exercise warrants at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will be void. Holders may exercise warrants as set forth in the prospectus supplement relating to the warrants being offered. Until a holder exercises the warrants to purchase any securities underlying the warrants, the holder will not have any rights as a holder of the underlying securities by virtue of ownership of warrants.



## **SELLING STOCKHOLDERS**

Selling stockholders are persons or entities that, directly or indirectly, have acquired or will from time to time acquire from us, our securities. Such selling stockholders may be parties to registration rights agreements with us, or we otherwise may have agreed or will agree to register their securities for resale. The initial purchasers of our securities, as well as their transferees, pledgees, donees or successors, all of whom we refer to as “selling stockholders,” may from time to time offer and sell our securities pursuant to this prospectus, any applicable prospectus supplement or post-effective amendment.

Information regarding the beneficial ownership of our securities by a selling stockholder, the number of securities being offered by a selling stockholder and the number of securities beneficially owned by a selling stockholder after the applicable offering, where applicable, will be set forth in a prospectus supplement or in a post-effective amendment. The applicable prospectus supplement or post-effective amendment will also disclose whether any of the selling stockholders has held any position or office with, has been employed by or otherwise has had a material relationship with us during the three years prior to the date of the applicable prospectus supplement, or post-effective amendment.

## PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus from time to time in any manner permitted under the Securities Act. Registration of the securities covered by this prospectus does not mean, however, that those securities will necessarily be offered or sold.

We may sell the securities separately or together:

- through one or more underwriters or dealers in a public offering and sale by them;
- directly to investors;
- to dealers; or
- through agents.

We may also make direct sales through subscription rights distributed to our stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

We may sell the securities from time to time:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Any of the prices may represent a discount from prevailing market prices. We will describe the method of distribution of the securities and the terms of the offering in the applicable prospectus supplement. Any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

If underwriters are used in the sale of any securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more of the transactions described above. Any underwritten offering may be on a best efforts or firm commitment basis. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters. Generally, the underwriters' obligations to purchase the securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the securities if they purchase any of the securities. We may use underwriters with whom we have a material relationship. We will describe in the applicable prospectus supplement, naming the underwriter, the nature of any such relationship.

In any sale of the securities, underwriters or agents may receive compensation from us or from purchasers of the securities, for whom they may act as agents, in the form of discounts, concessions or commissions. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities may be deemed to be underwriters under the Securities Act, and any discounts or commissions they receive from us and any profit on the resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act. Any initial public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

Each time we sell securities, we will describe the method of distribution of the securities in the applicable prospectus supplement relating to such transaction. The applicable prospectus supplement will, where applicable:

- identify any such underwriter or agent;
- describe any compensation in the form of discounts, concessions, commissions or otherwise received from us by each such underwriter or agent and in the aggregate to all underwriters and agents;
- identify the amounts underwritten or to be sold through the agent; and
- identify the nature of the underwriter's or agent's obligation to take the securities.

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We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment.

Underwriters, dealers and agents may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments made by the underwriters, dealers or agents, under agreements between us and the underwriters, dealers and agents.

We may grant underwriters who participate in the distribution of securities an option to purchase additional securities to cover over-allotments, if any, in connection with the distribution.

Unless otherwise specified in the related prospectus supplement, all securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. Any common stock sold pursuant to a prospectus supplement will be listed for trading on The Nasdaq Global Select Market or other principal market for our common stock. We may apply to list any series of debt securities, preferred stock or warrants on an exchange, but we are not obligated to do so. Therefore, there may not be liquidity or a trading market for any series of securities.

Any underwriter may engage in over-allotment transactions, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. We make no representation or prediction as to the direction or magnitude of any effect that such transactions may have on the price of the securities. For a description of these activities, see the information under the heading "Underwriting" or "Plan of Distribution" in the applicable prospectus supplement.

Underwriters, broker-dealers or agents who may become involved in the sale of the common stock may engage in transactions with and perform other services for us in the ordinary course of their business for which they receive compensation.

To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

**EXPERTS**

The financial statements of the Company incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended September 30, 2019 have been audited by Rose, Snyder & Jacobs, LLP as stated in their report incorporated by reference in this prospectus and elsewhere in this registration statement, and given upon the authority of said firm as experts in auditing and accounting.

**LEGAL MATTERS**

The legality of the issuance of the securities being offered hereby and the binding nature of any debt securities or warrants being offered hereby is being passed upon by Gibson, Dunn & Crutcher LLP, San Francisco, California. The legality of the securities will be passed upon by counsel for any underwriters, dealers or agents as may be specified in the applicable prospectus supplement.

## WHERE YOU CAN FIND MORE INFORMATION

We must comply with the informational requirements of the Exchange Act, and we are required to file reports and proxy statements and other information with the SEC. This prospectus, which forms part of the registration statement, does not contain all of the information included in the registration statement, including its exhibits and schedules. For further information about us and the securities described in this prospectus, you should refer to the registration statement, its exhibits and schedules and our reports, proxies, information statements and other information filed with the SEC. Our filings are available to the public on the Internet, through a database maintained by the SEC at <http://www.sec.gov>. Our filings are also available, free of charge, on our website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference in this prospectus the information that we file with it. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus. Later information that we file with the SEC will automatically update and supersede the information in this prospectus, any supplement and the documents listed below. Our SEC file number is 0-21898. We incorporate by reference the specific documents listed below:

- The Company's Annual Report on [Form 10-K](#) for the fiscal year ended September 30, 2019, filed on November 25, 2019;
- The Company's [Definitive Proxy Statement on Schedule 14A](#), filed on January 25, 2019;
- The Company's Current Report on [Form 8-K](#) filed on November 21, 2019; and
- The description of the Company's Common Stock contained in its registration statement on [Form 8-A/A](#) (Registration No. 000-21898), filed on November 1, 2010, including any amendments or reports filed for the purpose of updating such description.

All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or documents that is not deemed filed under such provisions on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus is a part has been withdrawn, shall be deemed incorporate

Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or 7.01 of Form 8-K.

Upon written or oral request, we will furnish without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any document incorporated by reference. Requests should be addressed to Corporate Secretary, 177 E Colorado Blvd., Suite 700, Pasadena, California 91105 or may be made telephonically at (626) 304-3400. We have not authorized anyone to provide you with different information. You should not assume that the information contained in this prospectus or the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying prospectus supplement is delivered or securities are sold on a later date.



**4,000,000 Shares**

**Common Stock**

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**PROSPECTUS SUPPLEMENT**

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*Book-Running Managers*

**Goldman Sachs & Co. LLC**

**Jefferies**

**Piper Jaffray**

*Passive Bookrunner*

**Cantor**

*Co-Managers*

**Baird**

**B. Riley FBR**

December , 2019

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