

Arrowhead Pharmaceuticals, Inc.

(ARWR-NASDAQ)

ARWR: Collaboration with Takeda for Co-Development and Co-Commercialization for ARO-AAT...

Based on our probability adjusted DCF model that takes into account potential future revenues from the company's development products, ARWR is valued at \$65/share. This model is highly dependent upon the continued clinical success of those programs and will be adjusted accordingly based upon future clinical outcomes.

Current Price (10/08/20) **\$48.10**
Valuation **\$65.00**

OUTLOOK

On October 8, 2020, Arrowhead Pharmaceuticals, Inc. (ARWR) announced a collaboration with Takeda Pharmaceutical Company Ltd. for the co-development and co-commercialization of ARO-AAT for the treatment of alpha-1 antitrypsin-associated liver disease (AATD). Arrowhead will receive an upfront payment of \$300 million and potential development, regulatory, and commercial milestones of up to \$740 million. ARO-AAT will be co-developed and co-commercialized in the U.S. under a 50/50 profit-sharing structure, with Takeda commercializing the drug outside the U.S. and Arrowhead receiving a tiered royalty on net ex-U.S. sales of 20-25%.

SUMMARY DATA

52-Week High **\$73.01**
52-Week Low **\$20.56**
One-Year Return (%) **54.02**
Beta **1.64**
Average Daily Volume (sh) **2,493,283**

Shares Outstanding (mil) **102**
Market Capitalization (\$mil) **\$4,920**
Short Interest Ratio (days) **N/A**
Institutional Ownership (%) **66**
Insider Ownership (%) **4**

Annual Cash Dividend **\$0.00**
Dividend Yield (%) **0.00**

5-Yr. Historical Growth Rates
Sales (%) **362.7**
Earnings Per Share (%) **N/A**
Dividend (%) **N/A**

P/E using TTM EPS **N/A**
P/E using 2020 Estimate **-50.9**
P/E using 2021 Estimate **-132.1**

Risk Level **High**
Type of Stock **Large-Growth**
Industry **Med-Drugs**

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Dec)	(Mar)	(Jun)	(Sep)	(Sep)
2019	34.7 A	48.2 A	42.7 A	43.3 A	168.8 A
2020	29.5 A	23.5 A	27.4 A	20.6 E	101.0 E
2021					73.2 E
2022					50.0 E

Earnings per Share

	Q1	Q2	Q3	Q4	Year
	(Dec)	(Mar)	(Jun)	(Sep)	(Sep)
2019	\$0.13 A	\$0.24 A	\$0.21 A	\$0.11 A	\$0.69 A
2020	-\$0.03 A	-\$0.20 A	-\$0.15 A	-\$0.15 E	-\$0.51 E
2021					-\$0.74 E
2022					-\$1.04 E

WHAT'S NEW

Business Update

Collaboration with Takeda for ARO-AAT

On October 8, 2020, Arrowhead Pharmaceuticals, Inc. (ARWR) [announced](#) a collaboration with Takeda Pharmaceutical Company Ltd. for the co-development and co-commercialization of ARO-AAT for the treatment of alpha-1 antitrypsin-associated liver disease (AATD).

Arrowhead will receive an upfront payment of \$300 million and is eligible to receive up to \$740 million in development, regulatory, and commercial milestones. The agreement calls for the companies to co-develop ARO-AAT in the U.S. under a 50/50 profit-sharing structure and for Takeda to receive an exclusive license to commercialize ARO-AAT outside the U.S. with Arrowhead receiving a tiered royalty of 20-25% on net ex-U.S. sales.

This deal follows closely an update provided by Arrowhead regarding interim 24-week biopsy data for four patients from AROAAT2002, an open label Phase 2 clinical trial of ARO-AAT. Those results showed that three of four patients experienced a decline in intra-hepatic mutant AAT protein (Z-AAT) polymer and one patient showed a reduction of 97%. Management had previously indicated that they did not anticipate seeing a reduction in Z-AAT polymer this early in the trial, and with a reduction of up to 97% in one patient these results clearly exceeded those expectations and could lead to a significant positive effect for AATD patients.

In addition, serum and intra-hepatic reductions in Z-AAT monomer of up to 93% and 95%, respectively, along with maximum reductions in ALT and GGT of 66% and 58%, respectively, were seen. The company has submitted a late-breaking abstract to the American Association for the Study of Liver Disease (AASLD), with the meeting set to occur virtually from Nov. 13-16, 2020.

The AROAAT2002 study is expected to enroll approximately 16 patients, with liver biopsies taken at 0, 6, 12, 18, and 24 months. The company is also conducting the Phase 2/3 SEQUOIA trial, in which patients will be treated for approximately two years. However, given the unexpectedly positive results seen at the six-month timepoint in AROAAT2002, the company may consider approaching regulators to streamline and accelerate that study.

Conclusion

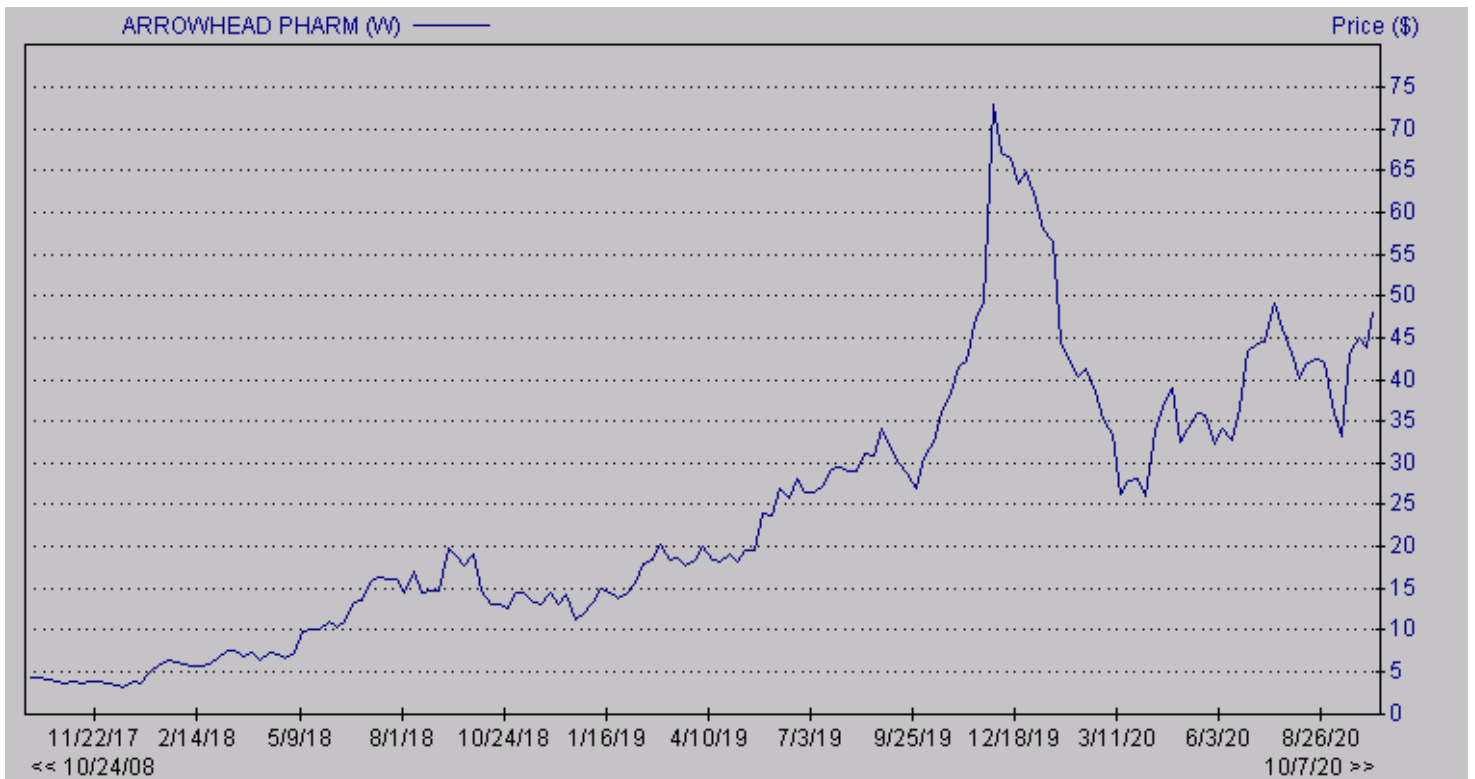
While not surprised that the company entered into a collaboration for the development and commercialization of ARO-AAT, we are a bit surprised at the speed with which the deal occurred following the announcement of interim 24-week data last month. We view this as a validation of ARO-AAT and the cash infusion further lengthens the company's cash runway while providing a world class partner for commercializing the drug outside the U.S. With the size of the company's pipeline we would not be surprised if additional deals similar to this one are executed for other development products. We had already modeled for Arrowhead to partner ARO-AAT for ex-U.S. sales, however the deal with Takeda is a bit more favorable for Arrowhead than what we had modeled, and after accounting for the upfront payment, potential milestones, and royalty we have increased our valuation to \$65.

PROJECTED FINANCIALS

Arrowhead Pharmaceuticals, Inc.	FY2019 A	Q1FY20 A	Q2FY20 A	Q3FY20 A	Q4FY20 E	FY2020 E	FY2021 E	FY2022 E
Revenue	\$168.80	\$29.45	\$23.53	\$27.38	\$20.62	\$100.98	\$73.22	\$50.00
<i>YOY Growth</i>	945.7%	-38.8%	-44.9%	-36.8%	-87.8%	191.4%	52.1%	17.1%
Total Revenues	\$168.8	\$29.5	\$23.5	\$27.4	\$20.6	\$101.0	\$73.2	\$50.0
<i>YOY Growth</i>	945.7%	-38.8%	-44.9%	-36.8%	-87.8%	191.4%	52.1%	17.1%
<i>Cost of Revenue</i>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Gross Income	\$168.8	\$29.5	\$23.5	\$27.4	\$20.6	\$101.0	\$73.2	\$50.0
<i>Gross Margin</i>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
R&D	\$81.0	\$23.4	\$29.4	\$32.6	\$25.3	\$110.7	\$105.0	\$110.0
<i>% R&D</i>	48.0%	79.4%	125.1%	119.0%	122.8%	109.6%	143.4%	220.0%
Salary and G&A	\$26.6	\$10.9	\$16.3	\$10.7	\$12.2	\$50.2	\$52.2	\$55.0
<i>% SG&A</i>	15.7%	37.1%	69.4%	39.3%	59.3%	49.7%	71.3%	110.0%
Other expenses	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<i>% Other</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating Income	\$61.2	(\$4.9)	(\$22.2)	(\$15.9)	(\$16.9)	(\$60.0)	(\$84.0)	(\$115.0)
<i>Operating Margin</i>	36.3%	-	-	-	-	-59.4%	-114.7%	-230.0%
Other Income (Net)	\$7.0	\$2.2	\$2.4	\$2.3	\$1.7	\$8.7	\$7.0	\$6.0
Pre-Tax Income	\$68.1	(\$2.7)	(\$19.8)	(\$13.6)	(\$15.2)	(\$51.3)	(\$77.0)	(\$109.0)
Net Taxes (benefit)	\$0.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<i>Tax Rate</i>	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reported Net Income	\$68.0	(\$2.7)	(\$19.8)	(\$13.6)	(\$15.2)	(\$51.3)	(\$77.0)	(\$109.0)
<i>YOY Growth</i>	-	-	-	-	-	-	-	-
<i>Net Margin</i>	40.3%	-	-	-	-	-50.8%	-105.2%	-218.0%
Reported EPS	\$0.69	(\$0.03)	(\$0.20)	(\$0.13)	(\$0.15)	(\$0.51)	(\$0.74)	(\$1.04)
<i>YOY Growth</i>	-	-	-	-	-	-	-	-
Basic Shares Outstanding	98.6	97.1	101.7	101.8	102.0	100.6	104.5	104.5

Source: Zacks Investment Research, Inc. David Bautz, PhD

HISTORICAL STOCK PRICE



Source: Zacks SCR

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