



Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These statements are based upon our current expectations and speak only as of the date hereof. Our actual results may differ materially and adversely from those expressed in any forward-looking statements as a result of various factors and uncertainties, including, without limitation, our developmental stage and limited operating history, our ability to successfully and timely develop products, enter into collaborations and achieve other projected milestones, rapid technological change in our markets, demand for our future products, legislative, regulatory and competitive developments and general economic conditions. Our Annual Report on Form 10-K and other SEC filings discuss some of the important risk factors that may affect our ability to achieve the anticipated results, as well as our business, results of operations and financial condition. Readers are cautioned not to place undue reliance on these forward-looking statements. Additionally, Arrowhead disclaims any intent to update these forward-looking statements to reflect subsequent developments.

Financial Highlights

ARWR - NASDAQ Global Select

Stock Price (1/6/23)	\$37.38
Common Shares Outstanding (9/30/22)	~106m
Market Capitalization	~\$4 bn
Cash and Investments (Proforma 9/30/22 plus \$250m collected for olpasiran royalty sale)	~\$732.3m

ARWR Profile

Arrowhead is a **mid-cap RNAi therapeutics platform company** with a **broad pipeline** of **wholly owned and partnered** product candidates.

20 in 25 pipeline expansion plan of having 20 individual drugs in clinical trials or at market in 2025.

Broad Pipeline:

- **12 clinical stage programs** (6 partnered; 6 wholly-owned)
- Mix of **early, mid, and later-stage** candidates targeting **rare and high prevalence diseases**
- Growing pipeline with **2-3 new clinical programs planned per year**

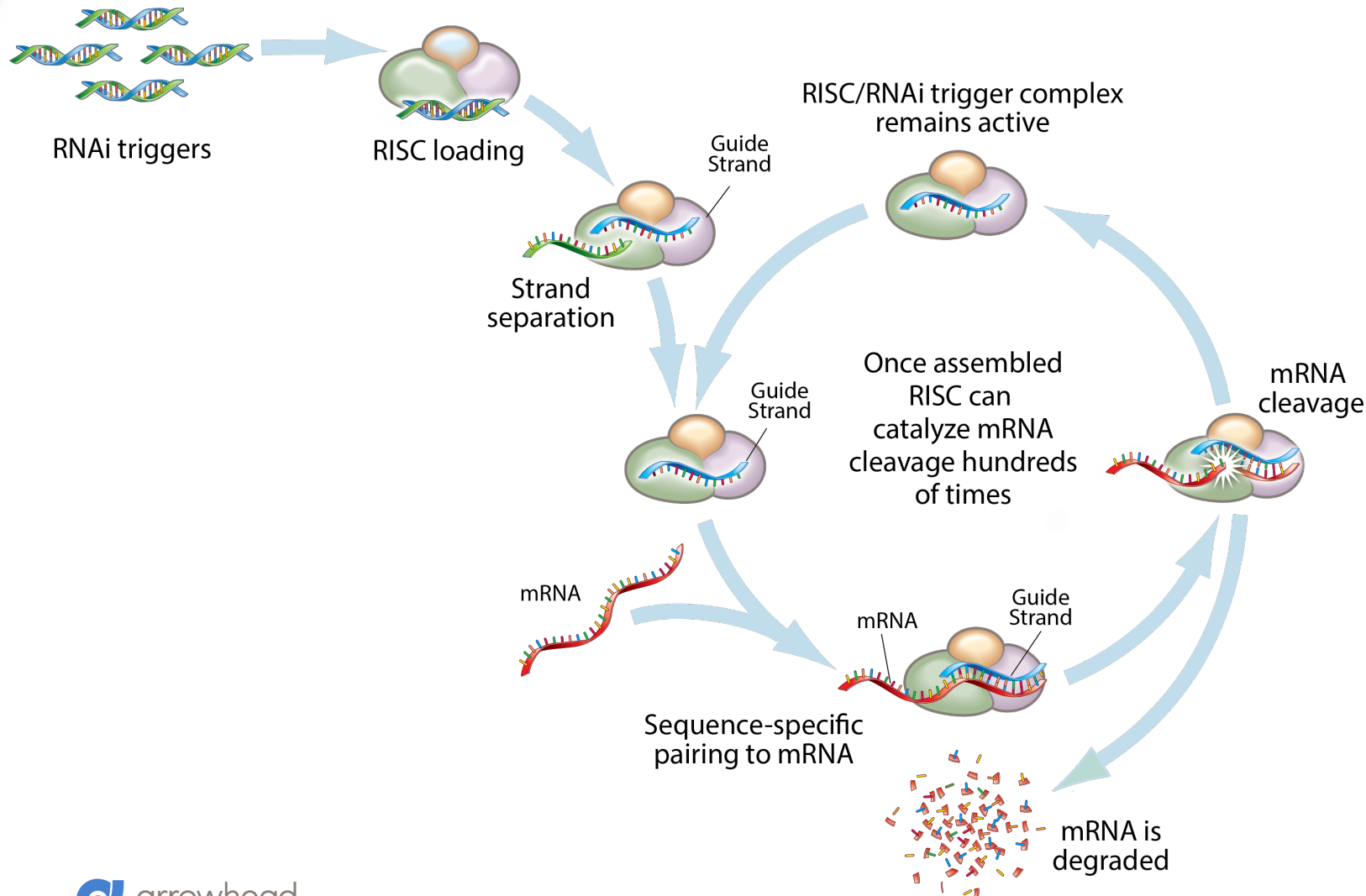
Proprietary Platform:

- **Targeted RNAi Molecules** platform (**TRiM™**) designed for **deep and durable gene silencing**
- Potential to be **best in class for liver** expressed genes
- **Fulfilling the promise** of bringing RNAi therapeutics to diseases **outside of the liver** with a goal of reaching a **new tissue type every 18-24 months**

Financial Resources:

- Strong balance sheet to **push candidates towards commercialization**
- **Non-dilutive capital** from Janssen, Amgen, Takeda, Horizon, GSK, and Royalty Pharma as milestones are achieved
- Potential for **additional** product and/or platform **deals**: expect ~1 new deal per year

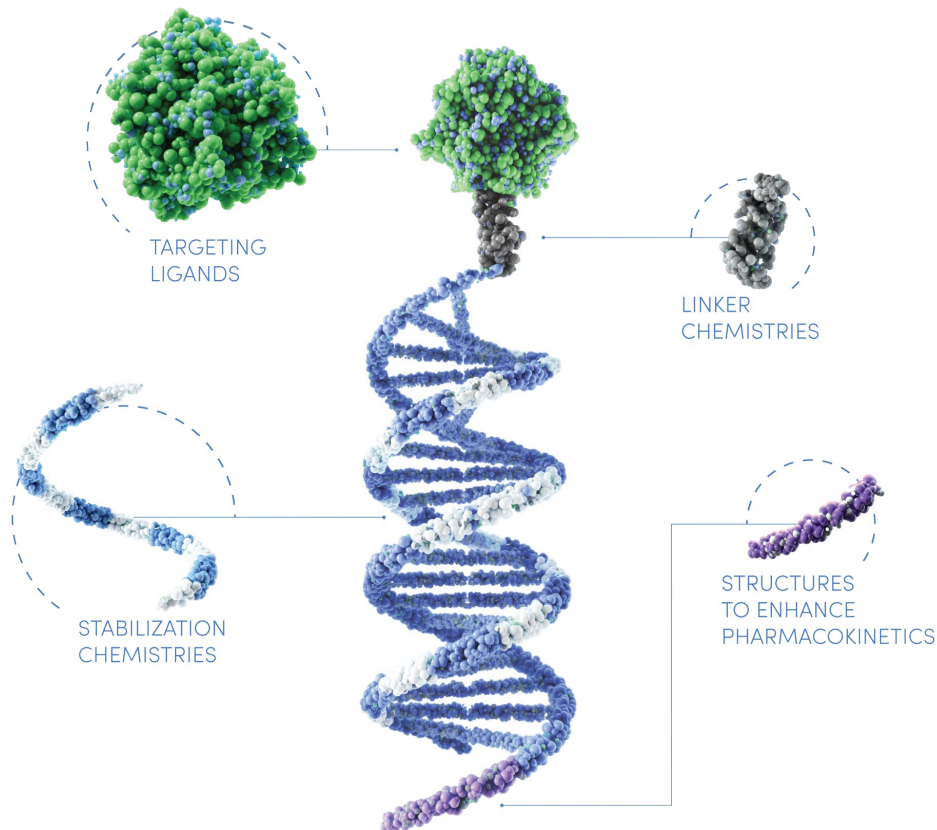
RNA Interference (RNAi) Mechanism



Advantages of RNAi

- Silences the expression of disease associated genes
- Potential to address previously "undruggable" targets
- High specificity
- Rapid path from idea to clinical candidate
- Positive record of clinical safety and tolerability















Targeted RNAi Molecules - TRiM™ Platform



TRiM™ has rules and algorithms to optimize trigger sequence and modification patterns

- **Activity** characterized by depth & duration of effect
 - Ability to unlock previously undruggable targets
- **Specificity** to maximize activity and innate stability with the potential for reduced off-target effects
- **Versatility** in structure and design offers multiple routes of administration and access to multiple tissues
 - Facilitates rapid drug development and speed to patients
- **Simplicity** in design translates to relatively lower costs, and production at scale

Pipeline

THERAPEUTIC AREA		PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	Product Rights
Cardiometabolic	ARO-APOC3 FCS, sHTG, CVD					
	ARO-ANG3 FH					
	Olpasiran CVD					AMGEN
Pulmonary	ARO-ENAC2 Cystic fibrosis					
	ARO-RAGE Inflammatory					
	ARO-MUC5AC Muco-Obstructive					
	ARO-MMP7 IPF					
Liver	ARO-HSD NASH					
	Fazirsiran AATD					 
	JNJ-3989 HBV					
	HZN-457 Gout					
	ARO-C3 PNH, IgAN, C3G					
	JNJ-75220795 NASH					
Muscle	ARO-DUX4 FSHD					

Cardiometabolic franchise

P1 data and interim analyses from multiple P2 studies provide guidance for positioning ARO-ANG3 and ARO-APOC3

ARO-ANG3

- Focus on familial hypercholesterolemia
 - Separate P3 studies for HoFH and HeFH
 - ~1.4m HeFH in US
 - ~1,200 HoFH in US
- Expect Q3M SQ dosing

ARO-APOC3

- Focus on FCS, sHTG, and mixed dyslipidemia
 - Separate P3 studies for each
 - ~500 FCS in US
 - ~4m sHTG in US
 - ~12m MD in US
- Expect Q3M or less frequent SQ dosing

Cardiometabolic franchise

ARO-ANG3 changes multiple lipid parameters

~20-40% in LDL-C

~30-45% in Non-HDL-C

~15-30% in ApoB

~40-65% in Triglycerides

~30% relative reduction in liver fat (MRI-PDFF at week 24)

Expect Q3M SQ dosing

**Expect to begin P3 studies in HoFH and
HeFH patients in 2023**

Cardiometabolic franchise

ARO-APOC3 changes lipid parameters associated with increased CV risk

82-88% ↓ APOC3

78-87% ↓ TGs

28-32% ↓ Non-HDL-C

21-23% ↓ LDL-C

20-25% ↓ ApoB

56-61% ↓ Remnant Cholesterol

51-70% ↑ HDL-C

**Currently in P3 for FCS and expect regulatory interactions
for sHTG and mixed dyslipidemia P3s in 2023**

Pulmonary franchise

Pulmonary franchise: opportunity to create substantial value quickly

- Arrowhead appears to be only RNAi company in pulmonary clinical studies
- Lungs are target rich
 - We see the possibility of 8-10 potential RNAi drugs
 - Asthma, COPD, IPF
- Clinical PoC from 1 provides confidence in entire franchise
 - De-risks platform, enables rapid pipeline expansion

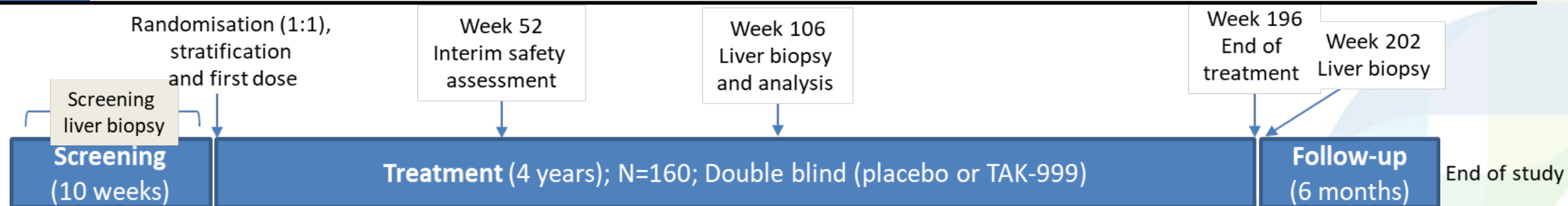
**Expect preliminary clinical data from
ARO-Muc5AC and ARO-RAGE in 1H 2023**

Fazirsiran P2 top line data

- Fazirsiran reduced serum, liver Z-AAT and histological globule burden in all treated subjects, consistent with previous open-label results
- This was in contrast to PBO, which showed no change or a slight increase in all three measures of Z-AAT burden
- At week 48 this resulted in
 - Improvement in portal inflammation in 42% for active vs 0% for PBO
 - Improvement in liver fibrosis in 50% for active vs. 38% for PBO
 - Natural history data show 16% over 3 years in larger sample size
- Fazirsiran was well tolerated with treatment emergent adverse events generally well balanced between fazirsiran and placebo groups
 - No TEAE-related study drug discontinuation, dose interruptions, or premature study withdrawals
 - Pulmonary function test (PFT) was stable and similar to placebo.

Takeda's planned Fazirsiran P3

Study design	<ul style="list-style-type: none"> Randomized, double-blind, placebo-controlled, parallel-arm, multicenter
Disease indication	<ul style="list-style-type: none"> PiZZ Alpha-1 Antitrypsin Deficiency (AATD) Associated Liver Disease
# Subjects	<ul style="list-style-type: none"> 160 subjects with F2, F3 and F4 Metavir Fibrosis at baseline
Primary EP	<ul style="list-style-type: none"> Decrease from baseline of at least 1 stage of histologic fibrosis (METAVIR staging) in the centrally read liver biopsy (F2/F3) done at Week 106
Dosing	<ul style="list-style-type: none"> Day 1, Wk 4, Wk 16 & then every 12 wks until EOT at Wk 196 (4 yrs) with liver biopsy at wks 106 and 202
Interim analysis (IA)	<ul style="list-style-type: none"> First IA is Safety Assessment at Wk 52 for safety to allow possible pulmonary inclusion/safety monitoring adjustment. Second IA is Primary analysis after F2/F3 reach Wk 106 for safety and efficacy



Expect to begin this quarter

Over the next 12 Months...

Potential data readouts:

- Fazirsiran SEQUOIA 12-month biopsy full data
- JNJ-3989 Phase 2b data
- ARO-ANG3
 - ARCHES-2 Phase 2 data
 - GATEWAY Phase 2 data
- ARO-APOC3
 - MUIR Phase 2 data
 - SHASTA-2 Phase 2 data
- ARO-C3 Phase 1/2
- ARO-RAGE Phase 1/2 data
- ARO-MUC5AC Phase 1/2 data
- ARO-MMP7 Phase 1/2 data
- JNJ-0795 Phase 1 data

Initiate new clinical studies, including:

- ARO-ANG3 Phase 3 studies
- ARO-APOC3 Phase 3 studies
- JNJ-0795 Phase 2 study
- ARO-HSD Phase 2b study
- ARO-C3 Phase 2
- ARO-RAGE Phase 2 study
- ARO-MUC5AC Phase 2
- ARO-MMP7 Phase

Potential for 2-4 new CTAs, including:

- ARO-DUX4 in facioscapulohumeral muscular dystrophy (FSHD)
- Additional undisclosed liver targets
- Additional undisclosed pulmonary targets
- Additional undisclosed tissue types

2023 will be productive

Arrowhead Pharmaceuticals

Thank You