

# **Agenda**

#### Welcome

Christine Lindenboom
 Senior Vice President, Investor Relations & Corporate Communications

#### **Overview**

 Yvonne Greenstreet, MBChB, MBA Chief Executive Officer

#### **Commercial Highlights**

Tolga Tanguler
 Chief Commercial Officer

#### **Alnylam Pipeline**

Pushkal Garg, M.D.
 Chief Medical Officer

#### **Financial Summary and Upcoming Milestones**

Jeff Poulton
 Chief Financial Officer

#### **Q&A Session**



# | Alnylam Forward Looking Statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than historical statements of fact regarding Alnylam's expectations, beliefs, goals, plans or prospects including, without limitation, statements regarding Alnylam's aspiration to become a top-tier biotech company, the potential for Alnylam to identify new potential drug development candidates and advance its research and development programs, Alnylam's ability to obtain approval for new commercial products or additional approved indications for its existing commercial products, and Alnylam's projected commercial and financial performance, including the expected range of net product revenues and net revenues from collaborations and royalties for 2024, the expected range of aggregate annual GAAP and non-GAAP R&D and SG&A expenses for 2024, the expected timing of topline data from the HELIOS-B Phase 3 clinical study, whether the HELIOS-B Phase 3 clinical study will deliver positive results and the potential of AMVUTTRA to have a market leading profile, including an impactful clinical profile, for the treatment of ATTR cardiomyopathy if approved, and the planned achievement of its "Alnylam P5x25" strategy, should be considered forward-looking statements. Actual results and future plans may differ materially from those indicated by these forward-looking statements as a result of various important risks, uncertainties and other factors, including, without limitation, risks and uncertainties relating to: Alnylam's ability to successfully execute on its "Alnylam P5x25" strategy; Alnylam's ability to discover and develop novel drug candidates and delivery approaches and successfully demonstrate the efficacy and safety of its product candidates; the pre-clinical and clinical results for Alnylam's product candidates, including vutrisiran, zilebesiran, and ALN-APP; actions or advice of regulatory agencies and Alnylam's ability to obtain and maintain regulatory approval for its product candidates, including vutrisiran, as well as favorable pricing and reimbursement; successfully launching, marketing and selling Alnylam's approved products globally; delays, interruptions or failures in the manufacture and supply of Alnylam's product candidates or its marketed products; obtaining, maintaining and protecting intellectual property; Alnylam's ability to successfully expand the approved indications for AMVUTTRA in the future; Alnylam's ability to manage its growth and operating expenses through disciplined investment in operations and its ability to achieve a self-sustainable financial profile in the future without the need for future equity financing; the direct or indirect impact of the COVID-19 global pandemic or any future pandemic on Alnylam's business, results of operations and financial condition; Alnylam's ability to maintain strategic business collaborations; Alnylam's dependence on third parties for the development and commercialization of certain products, including Roche, Novartis, Sanofi, Regeneron and Vir; the outcome of litigation; the risk of future government investigations; and unexpected expenditures; as well as those risks more fully discussed in the "Risk Factors" filed with Alnylam's most recent Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) and in other filings that Alnylam makes with the SEC. In addition, any forward-looking statements represent Alnylam's views only as of today and should not be relied upon as representing its views as of any subsequent date. Alnylam explicitly disclaims any obligation, except to the extent required by law, to update any forward-looking statements.

This presentation references non-GAAP financial measures. These measures are not in accordance with, or an alternative to, GAAP, and may be different from non-GAAP financial measures used by other companies. Percentage changes in revenue growth at Constant Exchange Rates, or CER, are non-GAAP financial measures which are presented excluding the impact of changes in foreign currency exchange rates for investors to understand the underlying business performance. CER represents growth calculated as if the exchange rates had remained unchanged from those used during the prior fiscal year.

Ш

Yvonne Greenstreet, MBChB, MBA Chief Executive Officer

# Overview



# **2023 Delivered Strong Progress Across the Business**

#### **Driving Robust Product Growth**









Combined net product revenues of \$1,241 million (39% growth YoY)



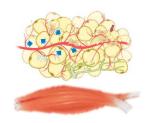
#### **Extending RNAi Leadership**



Human Proof of Concept for RNAi therapeutics in CNS

# **KARDIA**

Positive **zilebesiran** Phase 2 results in patients with mild-to-moderate hypertension



Preclinical delivery to new tissue types (adipose and muscle)

**55** medical publications, including **14** in high-impact<sup>^</sup> journals

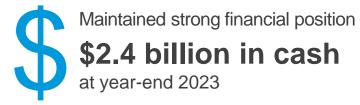




#### **Building a Sustainable Business**

Landmark partnership to maximize global opportunity for zilebesiran in hypertension











Continued recognition of award-winning culture



# Ambitious Five-Year Strategy to Drive Growth



Patients: Over 0.5 million on Alnylam RNAi therapeutics globally

**Products**: 6+ marketed products in rare and prevalent diseases

Pipeline: Over 20 clinical programs, with 10+ in late stages and 4+ INDs per year

Performance: ≥40% revenue CAGR through YE 2025

Profitability: Achieve sustainable non-GAAP profitability within period



# Ш

Tolga Tanguler
Chief Commercial Officer

# **Commercial Highlights**

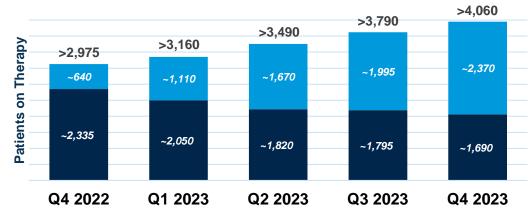


## **TTR Franchise Update: Q4 2023**

\$254M Total TTR Global Q4 2023 Net Product Revenues

>4,060

Total TTR patients worldwide at end of Q4 2023









### **Q4 TTR Franchise Highlights**

	YoY % Growth	QoQ % Growth
U.S.	38%	5%
ROW	28%	18%
Global	33%	10%

- U.S. QoQ growth of +5% driven by:
  - Demand (+7%): continued strong AMVUTTRA demand more than offsetting decrease in ONPATTRO due to cannibalization
  - Inventory (-2%): modest impact from Q4 AMVUTTRA inventory destocking
- ROW QoQ growth +18% driven by:
  - Steady demand growth across key markets, positive price impacts (mainly in Europe), and favorable stocking associated with timing of orders in partner markets
- Modest FX impact (YoY CER¹ growth = 31%)



# **Ultra Rare Franchise Update: Q4 2023**



>1,080

Total Ultra Rare patients worldwide at end of Q4 2023







### **Q4 Ultra Rare Franchise Highlights**

	YoY % Growth	QoQ % Growth
GIVLAARI	26%	10%
OXLUMO	37%	14%
Total Ultra Rare	30%	11%

- GIVLAARI QoQ growth of +10% driven by:
  - U.S. (+7%): favorable gross to net adjustment (release of wastage rebate accrual)
  - ROW (+16%): demand growth and timing of orders in partner markets
- OXLUMO QoQ growth of +14% driven by:
  - U.S. (+9%): increased demand
  - ROW (+16%): increased demand and timing of orders in partner markets
- Modest FX impact (YoY CER¹ growth = 27%)



Ш

Pushkal Garg, M.D.
Chief Medical Officer
Alnylam Pipeline



# Building an Industry-Leading TTR Franchise



2022 - 2024





Indications

Hereditary ATTR amyloidosis with polyneuropathy



~25K - 30K patients globally

2025+





Hereditary ATTR amyloidosis
with polyneuropathy
(ONPATTRO and AMVUTTRA)

Hereditary and wild-type
ATTR amyloidosis with
cardiomyopathy
(AMVUTTRA)

>300K patients globally

**LONGER-TERM** 





**ALN-TTRsc04** 

Hereditary ATTR amyloidosis with polyneuropathy (ONPATTRO, AMVUTTRA, ALN-TTRsc04)

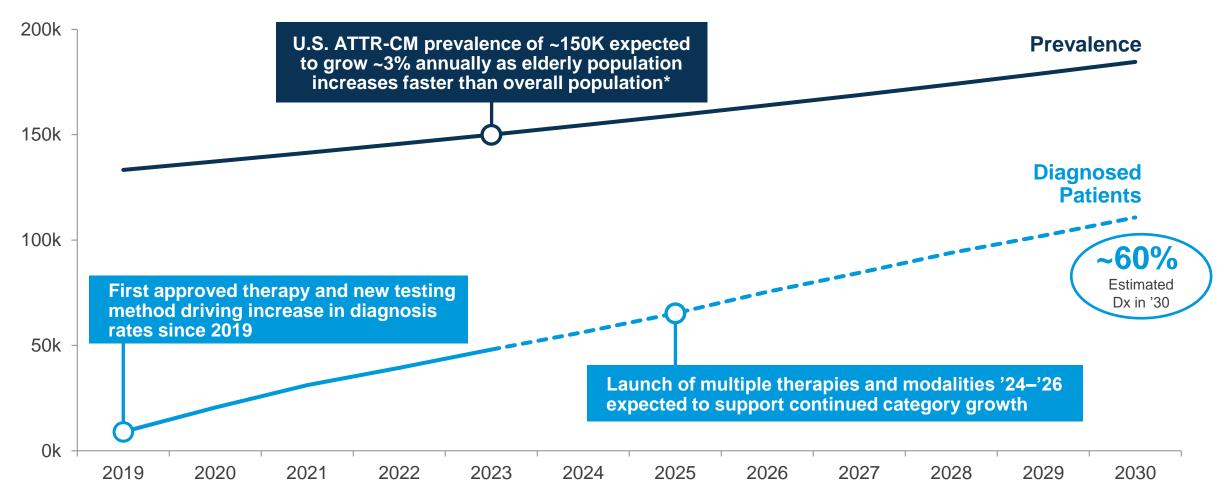
Hereditary and wild-type
ATTR amyloidosis with
cardiomyopathy
(AMVUTTRA and ALN-TTRsc04)

>300K patients globally



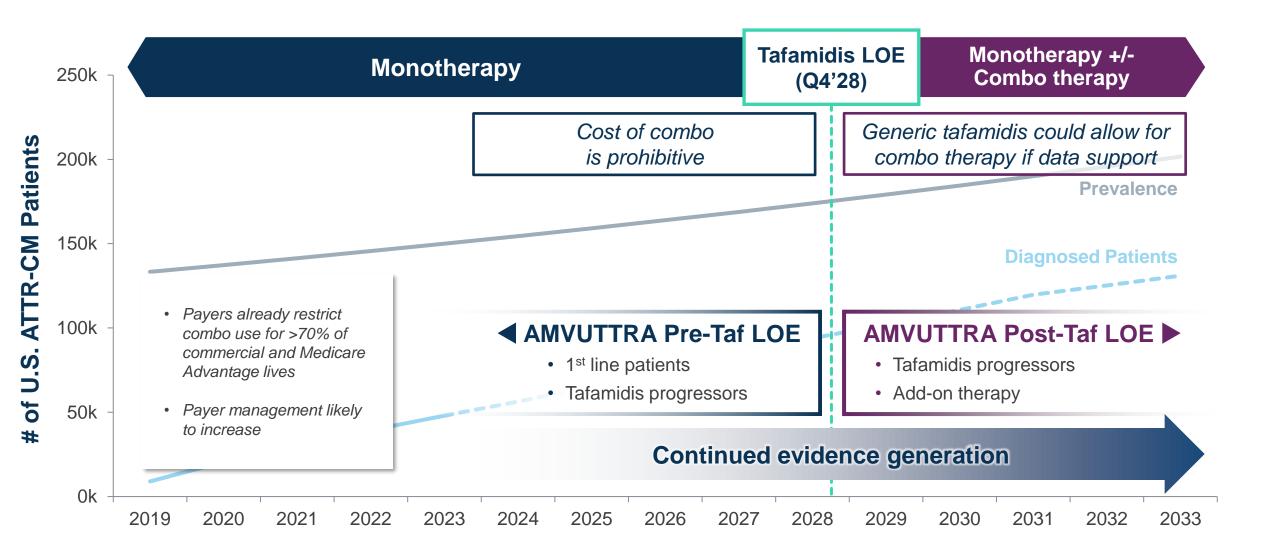
# | | Exceptional Growth Potential in ATTR-CM Market

#### # of U.S. ATTR-CM Patients





# | | Profile of Vutrisiran Expected to Support First-Line Positioning in ATTR-CM

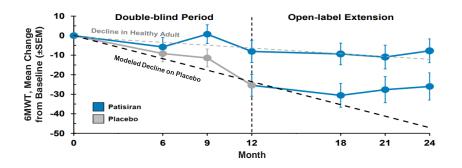




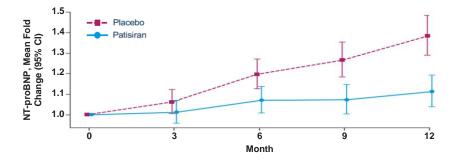
## | | | HELIOS · B Positioned to Deliver Outcomes Benefit in ATTR-CM

#### **Supportive Data from Patisiran in APOLLO-B**

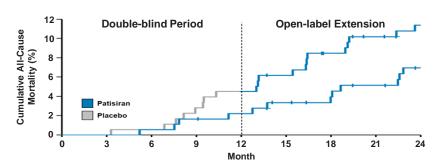
Evidence for Disease Stabilization



Reduction in Disease Biomarkers



Early
Separation
of Mortality
Curves



#### **Design**

- Powered for outcomes;
   ~2x size and ~3x length as
   APOLLO-B
- Enriched for patients most likely to benefit, NYHA I and II
- Longest follow-up of any ATTR-CM study (36 months in most patients)
- Analyses planned to demonstrate consistency of effect across key subgroups

#### **Execution**

- 10% overenrolled
- 60% monotherapy,
   40% baseline
   tafamidis
- Lower rate of tafamidis drop-ins than expected



### | | | HELIOS · B Positioned to Deliver Outcomes Benefit in ATTR-CM

**Supportive Data from Patisiran in APOLLO-B** 

Design

**Execution** 

hidis

Evidence for Disease Stabilization

**Reduction in** 

Disease Biomarkers

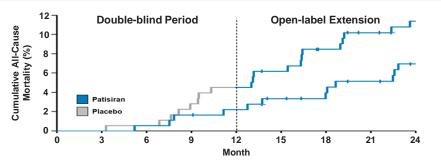
#### **Key learnings heading into HELIOS-B:**

- Until tafamidis loss of exclusivity, monotherapy likely dominant
- APOLLO-B data demonstrated clear efficacy profile:
  - Evidence of disease stabilization (functional and QOL readouts)
  - Evidence for mortality benefit with separation as early as nine months
  - Greatest effect in monotherapy group

overenrolled monotherapy, baseline

er rate of nidis drop-ins expected

Early
Separation
of Mortality
Curves





# | Enhancing HELIOS-B Statistical Plan

Supports Strong and Competitive Label



Focused on outcomes measures in overall AND monotherapy populations; latter expected to have largest treatment effect



Secondary endpoints honed to support differentiation and potential for disease stabilization



Up to 3 additional months incorporated into double-blind portion of trial to enhance statistical powering



# Updated HELIOS-B Statistical Analysis Methodology

#### **Study Duration**

#### **Original**

#### **Study Duration**

- Double-blind period up to 36 months
- Primary analysis conducted when last patient reaches Month 30



#### **Updated**

#### **Study Duration**

- Double-blind period up to 36 months
- Primary analysis conducted when last patient reaches Month 33

- Three additional months of event collection for patients enrolled later in study, enhancing statistical power
- ~60% of patients remaining on study will have greater follow-up; ~20% more patients will have follow-up to full 36 months
- Longest double-blind follow-up in any ATTR-CM study to date



# Updated HELIOS-B Statistical Analysis Methodology

#### **Primary Endpoint**

#### **Original**

#### **Primary Endpoint**

 Composite outcome of all-cause mortality and recurrent CV events in overall population



#### **Updated**

#### **Primary Endpoint**

- Composite outcome of all-cause mortality and recurrent CV events, analyzed in:
  - Overall population
  - Monotherapy population (patients not on tafamidis at baseline)

- Hospitalization and mortality viewed as most important outcomes; will be analyzed in:
  - Overall population (100%) to show broad effect in largest sample size
  - Monotherapy group (60%) to show vutrisiran's greatest impact
- Primary endpoint tested in parallel; study positive if:
  - <u>Both</u> analyses p ≤ 0.05, *OR*
  - <u>Either</u> analysis p ≤ 0.025



# Updated HELIOS-B Statistical Analysis Methodology

#### **Secondary Endpoints**

#### **Original**

#### **Select Secondary Endpoints**

- 6-MWT distance
- Kansas City Cardiomyopathy Questionnaire (KCCQ OS) score
- Echocardiographic parameters
- All-cause mortality & recurrent allcause hospitalizations & urgent HF visits
- All-cause mortality
- Recurrent CV events
- NT-proBNP



#### **Updated**

#### **Secondary Endpoints**

- 6-MWT distance
- KCCQ-OS
- All-cause mortality
- NYHA Class

- Secondary endpoints streamlined to clinically relevant endpoints
- Prioritized to show potential differentiation and disease stabilization
- Other prior secondaries will still be analyzed

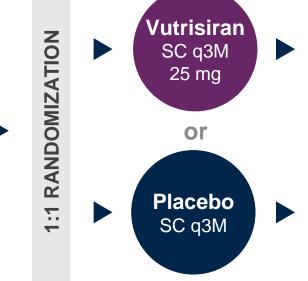


# | | | Vutrisiran H E L I O S · B Phase 3 Study

Randomized, Double-Blind Outcomes Study in ATTR Amyloidosis Patients with Cardiomyopathy

# N = 655 Patient Population

- ATTR amyloidosis; wild-type or any TTR mutation
- Confirmed cardiomyopathy and medical history of symptomatic heart failure
- NYHA ≤ III; minimum walk and NT-proBNP limits at baseline
- 40% of patients on tafamidis at baseline



#### **Primary Endpoint**

- Composite outcome of all-cause mortality and recurrent CV events, assessed when last patient reaches Month 33, in:
  - Overall population
  - Monotherapy population

#### **Secondary Endpoints**

- 6-MWT distance
- Kansas City Cardiomyopathy Questionnaire score
- All-cause mortality
- NYHA Class

Topline results expected late June/early July 2024

Assuming positive results, sNDA submission expected **late 2024** 





# III Approved, Vutrisiran Expected to Have Market-Leading Profile in ATTR-CM

Rapidly growing market with high unmet patient need

HCPs report that

~75% of patients
treated with tafamidis
have only partial or
no response<sup>1</sup>



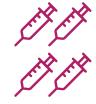
Unique MOA

- Targeted RNAi mechanism enables rapid knockdown
- Upstream of approved medicines, reduces pathogenic protein



Potential for Impactful Clinical Profile

- Reduction in mortality and CV hospitalizations
- Stabilization of functional capacity and quality of life
- Well tolerated safety profile



Only 4 Doses per Year

- Quarterly dosing, strong adherence, aligning with MD visits
- In-office or at-home administration



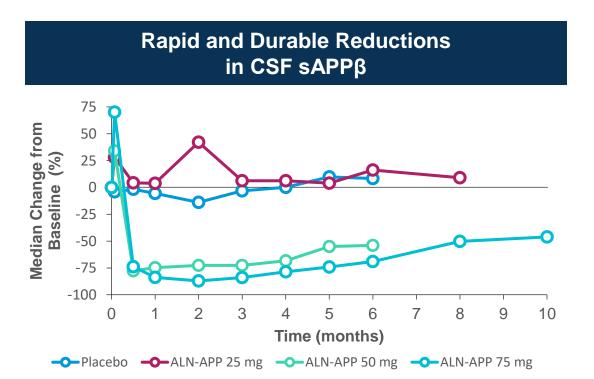
Favorable Payer Dynamics

- Medicare Part B coverage expected to result in majority of patients having \$0 out-of-pocket costs
- Monotherapy favored by payers prior to tafamidis LOE



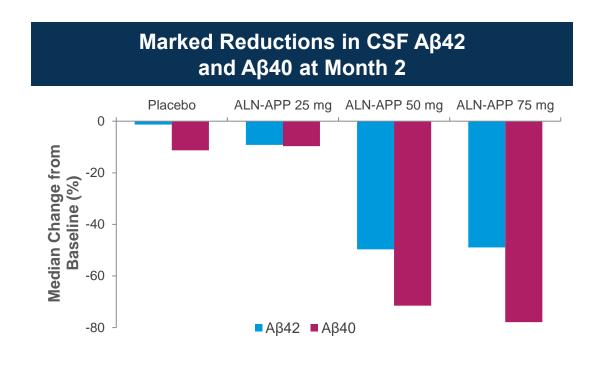
# **ALN-APP Achieved Rapid and Durable Reductions in Key Biomarkers**

Phase 1 Results\* Mark First Demonstration of Gene Silencing by RNAi Therapeutics in Human Brain





- AEs generally mild to moderate in severity; most unrelated to study drug
- CSF safety biomarkers, routine lab assessments, and preliminary data for exploratory biomarker neurofilament light chain (NfL) all continued to show no concerning trends



Dose escalation in Phase 1 Part A ongoing

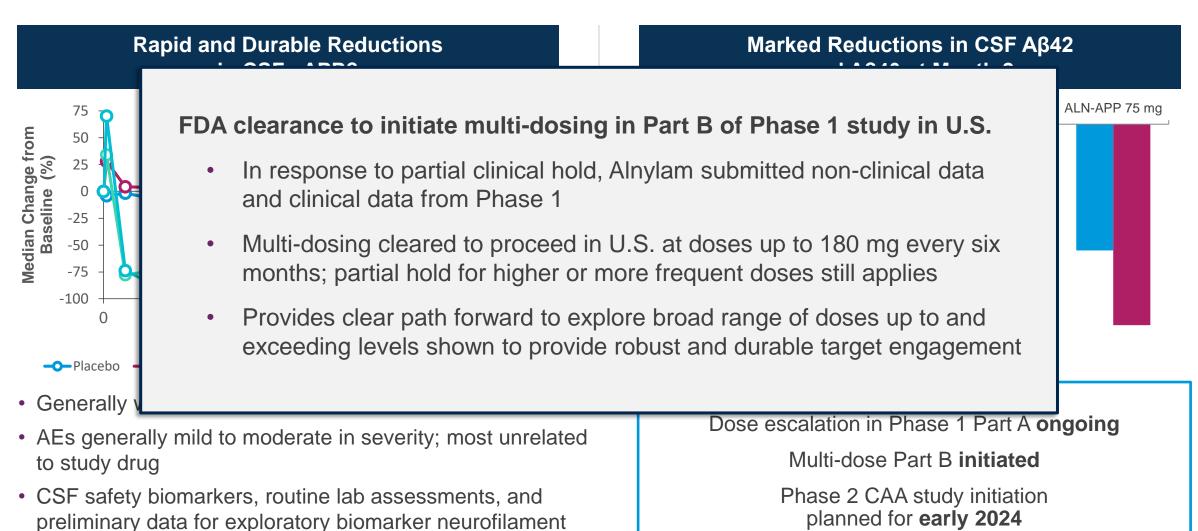
Multi-dose Part B initiated

Phase 2 CAA study initiation
planned for early 2024



# **ALN-APP Achieved Rapid and Durable Reductions in Key Biomarkers**

Phase 1 Results\* Mark First Demonstration of Gene Silencing by RNAi Therapeutics in Human Brain





light chain (NfL) all continued to show no concerning trends

# **Recent Pipeline Progress**

#### Zilebesiran

Hypertension

- Positive results from KARDIA-1 Phase 2 dose-ranging study
- Up to 16.7 mmHg placebo-adjusted reduction of 24-hour mean systolic blood pressure at three months
- Encouraging safety and tolerability profile

#### **ALN-TTRsc04**

ATTR amyloidosis

- Positive Phase 1 study in healthy volunteers
- Rapid knockdown with mean serum TTR reduction up to 97%, durability supporting potential for annual dosing
- Encouraging safety and tolerability profile

#### **ALN-KHK**

Type 2 diabetes

- Positive Phase 1 study in overweight to obese healthy volunteers
- · Robust target engagement with single dose; potential for quarterly or less frequent dosing
- · Encouraging safety and tolerability profile

#### Additional R&D Highlights

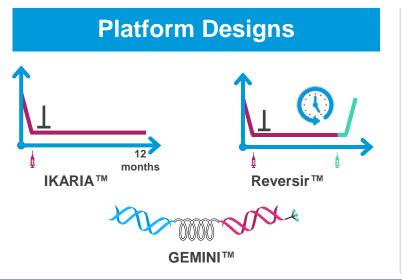
- Notable progress in extrahepatic delivery (e.g., muscle and adipose)
- · Early advancement of novel targets in areas of high unmet need
- Accelerating pipeline development on track for 15 INDs by end of 2025 (including partner programs)



# Multiple Sources of Sustainable Innovation Drive Robust Pipeline

Targeting Nine Alnylam-Led INDs Across Four Tissues by End of 2025







#### **By End of 2025**







# Ш

Jeff Poulton
Chief Financial Officer

# Financial Summary and Upcoming Milestones



# Q4 and Full Year 2023 Financial Summary

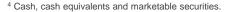
Financial Results (\$ millions)	Q4 2023	Q4 2022	Q4 Reported Growth %	Q4 CER Growth % <sup>3</sup>
Net Product Revenues	\$346	\$262	32%	30%
Net Revenues from Collaborations	\$76	\$71		
Royalty Revenues	\$17	\$3		
Total Revenues	\$440	\$335	31%	29%
Product Cost of Goods Sold	\$72	\$46		
Cost of Collaborations and Royalties	\$14	\$5		
Total Cost of Goods Sold	\$86	\$51		
Gross Margin	\$354	\$284		
Product Sales Gross Margin %1	79%	82%		
Non-GAAP R&D Expenses <sup>2</sup>	\$253	\$245	3%	
Non-GAAP SG&A Expenses <sup>2</sup>	\$175	\$185	-5%	
Non-GAAP Operating Loss <sup>2</sup>	(\$74)	(\$146)		

FY 2023	FY 2022	FY23 Reported Growth %	FY23 CER Growth % <sup>3</sup>
\$1,241	\$894	39%	39%
\$546	\$135		
\$41	\$8		
\$1,828	\$1,037	76%	76%
\$268	\$140		
\$42	\$29		
\$310	\$169		
\$1,518	\$869		
78%	84%		
\$907	\$791	15%	
\$671	\$632	6%	
(\$60)	(\$554)		

Financial Results (\$ millions)	Dec 31, 2023	Dec 31, 2022
Cash & Investments <sup>4</sup>	\$2,439	\$2,192

<sup>1</sup> Product Sales GM % calculation excludes Cost of Collaborations and Royalties associated with Net Revenues from Collaborations and Royalty Revenues.

<sup>&</sup>lt;sup>3</sup> CER growth rates represent growth at Constant Exchange Rates, a non-GAAP financial measure determined by comparing Q4 2023 performance (restated using Q4 2022 exchange rates) to actual Q4 2022 reported performance and by comparing full-year 2023 performance (restated using 2022 exchange rates) to actual full year 2022 reported performance. A reconciliation of these non-GAAP financial measures to the comparable GAAP measures, as well as additional information regarding our use of non-GAAP financial measures, are included in the Appendix to this presentation and in our press release dated February 15, 2024, which is accessible in the Investors section of our website at www.alnylam.com.





<sup>&</sup>lt;sup>2</sup> Non-GAAP R&D expenses, SG&A expenses and operating income / (loss) are non-GAAP financial measures that exclude from the corresponding GAAP measures costs related to stock-based compensation expense.

## 2024 Full Year Guidance

	Guidance	Key Assumptions
Net Product Revenue <sup>1</sup> ONPATTRO, AMVUTTRA, GIVLAARI, OXLUMO	\$1,400M to \$1,500M	Uses January 31, 2024 FX rates
Net Product Revenue Growth vs. 2023 at reported Fx rates <sup>1</sup>	13% to 21%	Uses January 31, 2024 FX rates
Net Product Revenue Growth vs. 2023 at constant exchange rates (i.e., operational growth) <sup>2</sup>	13% to 21%	Uses 2023 actual FX rates
Net Revenues from Collaborations & Royalties	\$325M to \$425M	
Non-GAAP Combined R&D and SG&A Expenses <sup>3</sup>	\$1,675M to \$1,775M	

<sup>&</sup>lt;sup>2</sup> CER = constant exchange rate, representing growth calculated as if exchange rates had remained unchanged from those used in 2023. CER is a non-GAAP financial measure. Information regarding our use of non-GAAP financial measures is available in our press release dated February 15, 2024, which is accessible in the Investors section of our website at www.alnylam.com.



<sup>&</sup>lt;sup>1</sup> Our 2024 FY Guidance is based upon January 31, 2024 FX rates including 1 EUR = 1.08 USD and 1 USD = 147 JPY

# | | Alnylam 2024 Goals

			Early	Mid	Late
Onpattro (vutrisiran) en composition (vutrisiran) en compo		Combined Net Product Revenue Guidance to be Provided at Q4/YE 2023 Earnings			•
VUTRISIRAN	ATTD Amyloidesis	HELIOS-B Topline Results			
VUTRISIRAN	ATTR Amyloidosis	sNDA Submission			•
ALN-TTRsc04*	ATTR Amyloidosis	Initiate Phase 3 ATTR-CM Study			•
ZILEBESIRAN*	Lyportonoion	KARDIA-2 Phase 2 Topline Results	•		
ZILEBESIKAN	NN* Hypertension Initiate KARDIA-3 Phase 2 Study		•		
	Alzheimer's Disease	Interim Phase 1 Part B Multi-Dose Results			•
ALN-APP*		Initiate Phase 2 Study			•
Cerebral Amyloid Angiopathy		Initiate Phase 2 Study	•		
ALN-KHK*	Type 2 Diabetes	Initiate Phase 1 Part B	•		
ALN-BCAT*	Hepatocellular Carcinoma	Initiate Phase 1 Study	•		
ADDITION	NAL PROGRAMS	File 3 New INDs			•
KEY PARTNER-LED PROGRAM MILESTONES					
FITUSIRAN* (Sanofi)	Hemophilia	Submit NDA Filing		2024	
ELEBSIRAN* (Vir)	Chronic HBV/HDV Infection	Phase 2 Results		Q2, Q4	



# Q4 and Full Year 2023 Financial Results Q&A Session



| | Thank You!



# Q4 and Full Year 2023 Financial Results Appendix



# Alnylam Pharmaceuticals, Inc.

Reconciliation of Selected GAAP Measures to Non-GAAP Measures (In thousands)

	 Three Months Ended December 31,		Twelve Mon Decemb				
	2023		2022		2023		2022
Reconciliation of GAAP to Non-GAAP research and development:							
GAAP Research and development	\$ 272,141	\$	262,039	\$	1,004,415	\$	883,015
Less: Stock-based compensation expenses	 (19,085)		(16,944)		(97,273)		(92,161)
Non-GAAP Research and development	\$ 253,056	\$	245,095	\$	907,142	\$	790,854
Reconciliation of GAAP to Non-GAAP selling, general and administrative:							
GAAP Selling, general and administrative	\$ 198,123	\$	210,344	\$	795,646	\$	770,658
Less: Stock-based compensation expenses	 (22,909)		(25,823)		(124,407)		(138,488)
Non-GAAP Selling, general and administrative	\$ 175,214	\$	184,521	\$	671,239	\$	632,170
Reconciliation of GAAP to Non-GAAP operating loss:							
GAAP operating loss	\$ (116,404)	\$	(188,614)	\$	(282,175)	\$	(785,072)
Add: Stock-based compensation expenses	 41,994		42,767		221,680		230,649
Non-GAAP Operating loss	\$ (74,410)	\$	(145,847)	\$	(60,495)	\$	(554,423)



# Alnylam Pharmaceuticals, Inc.

Reconciliation of Revenue and Growth at Constant Currency

	December	31, 2023
	Three Months Ended	Twelve Months Ended
Total TTR net product revenue growth, as reported	33 %	40 %
Add: Impact of foreign currency translation	(2)	
Total TTR net product revenue growth at constant currency	31 %	40 %
Total Ultra Rare net product revenue growth, as reported	30 %	35 %
Add: Impact of foreign currency translation	(3)	
Total Ultra Rare net product revenue growth at constant currency	27 %	35 %
Total net product revenue growth, as reported	32 %	39 %
Add: Impact of foreign currency translation	(2)	
Total net product revenue growth at constant currency	30 %	39 %
Total revenue growth, as reported	31 %	76 %
Add: Impact of foreign currency translation	(2)	
Total revenue growth at constant currency	29 %	76 %

