



## Arête Discoveries Mission:

- Alleviate Suffering
- Arrest Progression
- Never Stop Searching

## What are we doing?

- Pursuing treatments for neurodegenerative diseases that have no significant treatment and represent enormous unmet need

## Which indication first?

- Amyotrophic lateral sclerosis (ALS), “*Lou Gehrig’s*” disease

## Why ALS?

- ALS provides the fastest path to human clinical trials with the most FDA support programs providing highest potential financial returns
- ALS will save us ~ +/- 5 years and millions of dollars

## What other neurodegenerative diseases are in sight?

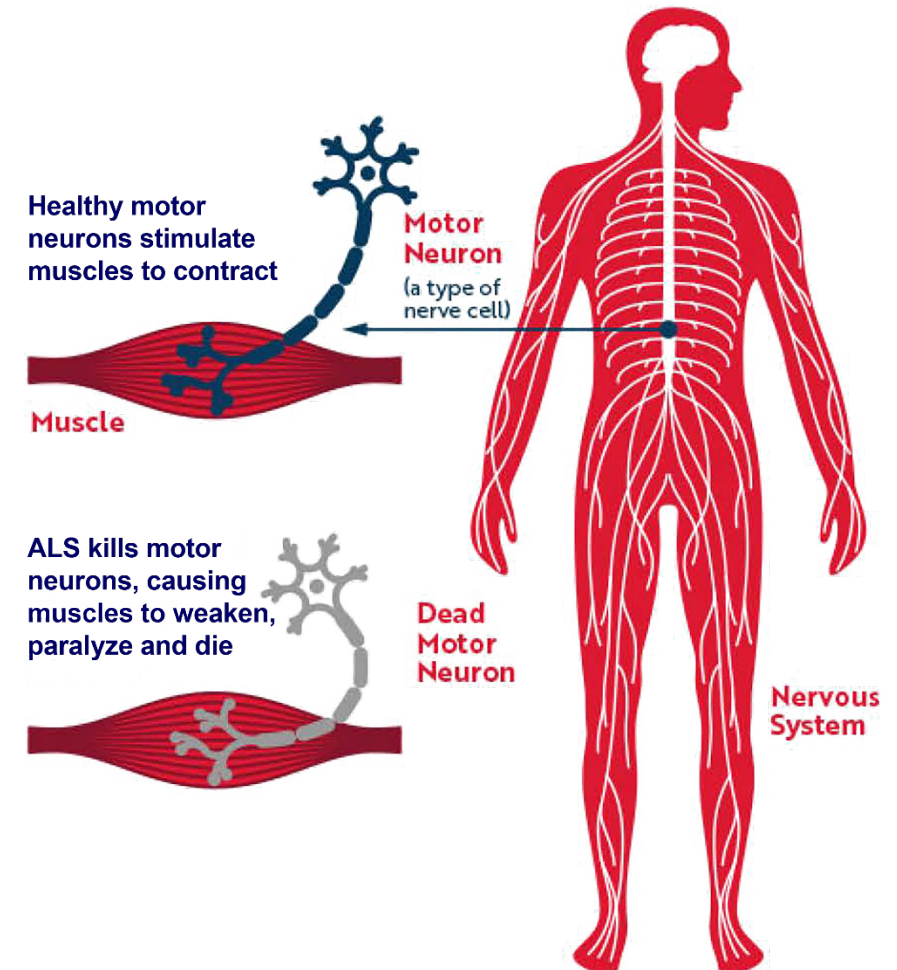
- We have our own research showing eradication of multiple sclerosis (MS), as well as prophylactic prevention, in mice
- We have supporting evidence of eradication of Alzheimer's Disease (AD), Type 1 diabetes, Type 2 diabetes and lupus nephritis in rodents as well

# THE PROBLEM - ALS

## AMYOTROPHIC LATERAL SCLEROSIS

### ALS IS:

- ✓ RARE – 30,000 in the U.S.
- ✓ FATAL – 3 to 5 years from time of diagnosis
- ✓ VIRTUALLY UNTREATABLE
- ✓ 90% HAVE NO KNOWN CAUSE
- ✓ EXTREMELY EXPENSIVE CARE
- ✓ **IS U.S. GOV. PRIORITY (FAST TRACK & LEGISLATIVE)**
- ✓ **FOR MEANINGFUL TREATMENT**



## What has our drug ART203 accomplished?

- Amelioration and prevention of MS in mice
- Successful positive impact on aggressive form of ALS
  - Delayed onset of disease
  - Reduced severity measured by body weight
  - Increased maintenance of physical strength via grip strength
  - Prolonged life span (survivability)
- ALS and MS have remarkably similar chemically destructive pathways in the brain

## What have we accomplished in ALS?

- ✓ Target Identification – What drug to develop, ART203
- ✓ Compound Screening – Can the drug have an effect
- ✓ Lead Identification – Select the best variation of the drug
- ✓ Preclinical Studies – Is the drug effective in an animal
- ✓ Replicated Proof-of-Concept – Are results consistent

**Of the 10,000+ compounds considered each year,  
fewer than 50 make it this far**

## **What's Next?**

- **Expansion of patent protection by building a “MOAT” of protective filings**
- **Extensive bioanalysis of ART203 (this will never stop)**
- **One more validation study in diseased animals**
- **Investigational New Drug (IND) enabling studies for the FDA in healthy animals demonstrating safety and absence of adverse implications**
  - **+/- 10 of the 10,000 get to IND**
- **Selection of a chemistry, manufacturing, and control (CMC) company to produce the drug for human clinical trials**
- **Recruit keys “C” suite individual(s) with demonstrated success transitioning a research firm of excellence (Arete) to a viable commercial entity capable of licensing and partnering for marketing and distribution (profits)**

# From Problem to Commercial Solution

**Amyotrophic Lateral Sclerosis (ALS), or  
“Lou Gehrig’s Disease”**

**Always FATAL, average 3-5 years**

**NO significant treatments**

**The Problem**  
amyotrophic lateral sclerosis  
**ALS**

**ART201** is a biologic therapy,  
discovered and developed by  
**Arete Discoveries**

**Arete** has invested 7 years, and  
over \$2MM to get here

(part of)  
**The Solution**  
**ART201**  
(prototype)

**arête**  
DISCOVERIES

**The Product**  
**ART203**  
(commercial product)

**Proof of Concept  
Completed**  
using  
**ALS TDI**

**ALS** THERAPY DEVELOPMENT  
**INSTITUTE**

Arete is in active discussions with  
chemical manufacturing organizations  
(CMO’s) for investigational new drug  
(IND) studies for the FDA

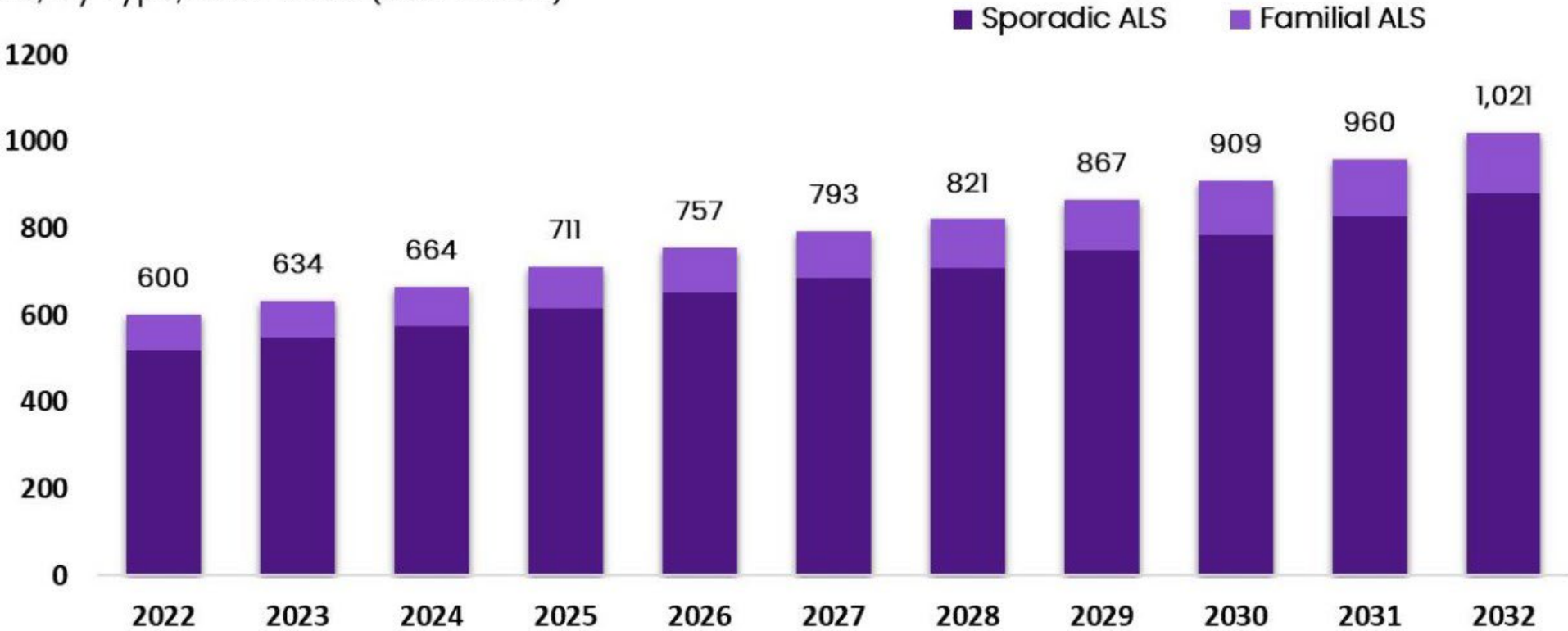
**ALS TDI** (Therapy Development  
Institute) is who Arete hired to  
execute our fALS mouse study.  
ALS TDI is the largest non-profit  
lab in the world, focused on ALS.  
Of the 500+ treatments ALS TDI tested to date,  
**ART201 is in the top 10!**



# Market Opportunity

## Global Amyotrophic Lateral Sclerosis Treatment market

Size, by Type, 2022-2032 (USD Million)



The Market will Grow  
At the CAGR of:

**5.6%** The forecasted market  
size for 2032 in USD:

**\$1021M**

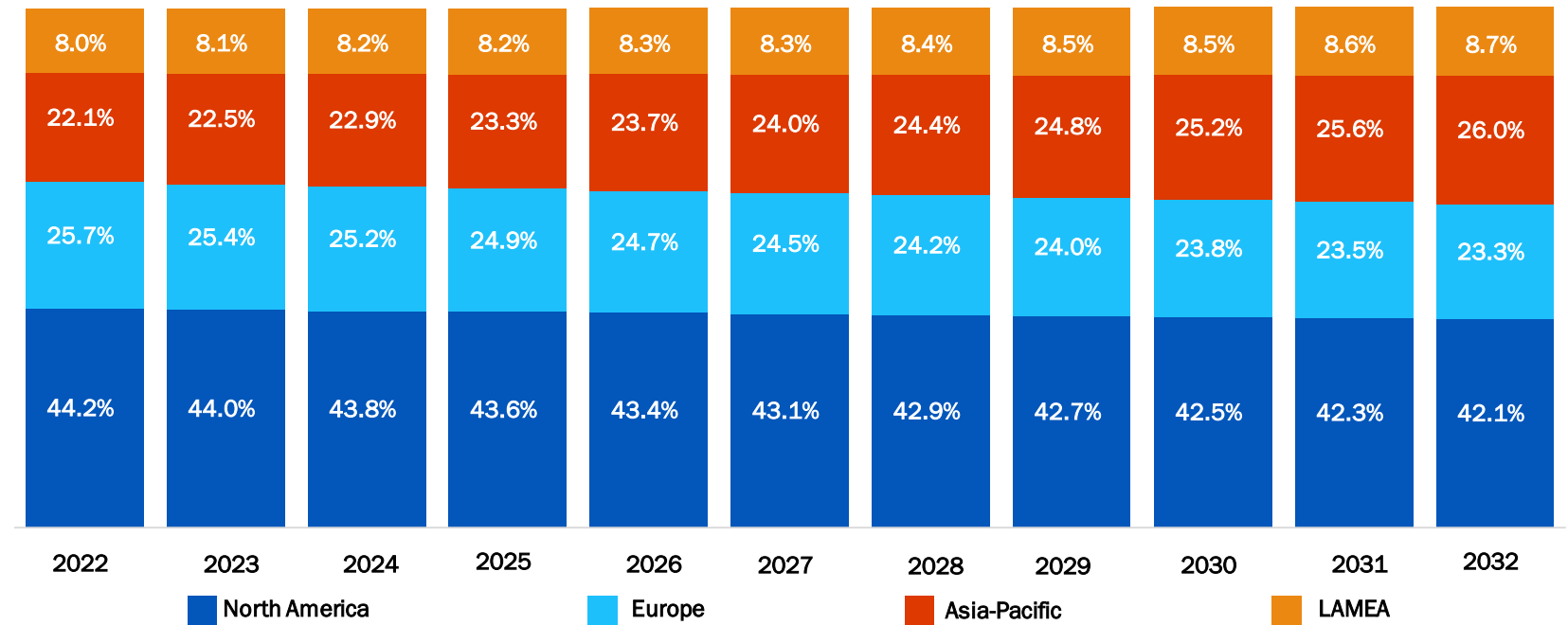


# Market Opportunity

## Global Amyotrophic Lateral Sclerosis Treatment Market

Opportunity Analysis and Industry Forecast, 2023-2032

FIGURE 01. AMYOTROPHIC LATERAL SCLEROSIS TREATMENT MARKET BY REGION, 2022-2032 (%)



Source: Primary Research, Government Publications, Company Releases, and AMR Analysis

### 1.1.1. Global Market size and forecast, by region

The global amyotrophic lateral sclerosis treatment market was valued at \$662.25 million in 2022, and is projected to reach \$1,038.94 million by 2032, registering a CAGR of 4.6%. North America was the highest revenue contributor, accounting for \$292.65 million in 2022, and is estimated to reach \$437.29 million by 2032, with a CAGR of 4.1%. Europe is estimated to reach \$242.07 million by 2032, at a significant CAGR of 3.6%. North America and Europe collectively accounted for around 69.84% share in 2022, with the former constituting around 44.19% share. Asia-Pacific and LAMEA are expected to witness considerable CAGRs of 6.3% and 5.4%, respectively, during the forecast period. The cumulative share of these two regions was 30.16% in 2022 and is anticipated to reach 34.61% by 2032.

## Global Amyotrophic Lateral Sclerosis Treatment Market

Opportunity Analysis and Industry Forecast, 2023-2032

**TABLE 01.** AMYOTROPHIC LATERAL SCLEROSIS TREATMENT MARKET, BY REGION, 2022-2032 (\$MILLION)

REGION	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	CAGR (2023-2032)
North America	292.65	305.24	318.30	331.82	345.78	360.17	374.94	390.08	405.56	421.31	437.29	4.1%
Europe	169.87	176.39	183.11	190.02	197.10	204.34	211.71	219.19	226.77	234.41	242.07	3.6%
Asia-Pacific	146.56	156.25	166.50	177.33	188.74	200.75	213.35	226.55	240.36	254.75	269.71	6.3%
LAMEA	53.18	56.16	59.30	62.59	66.03	69.63	73.38	77.29	81.34	85.54	89.87	5.4%
<b>Total</b>	<b>662.25</b>	<b>694.04</b>	<b>727.22</b>	<b>761.76</b>	<b>797.64</b>	<b>834.89</b>	<b>873.38</b>	<b>913.12</b>	<b>954.03</b>	<b>996.01</b>	<b>1,038.94</b>	<b>4.6%</b>

Source: Primary and Secondary Research and AMR Analysis

\*Note: Total numbers may differ due to rounding off the decimal places.

# Demonstration of Investment Value Increase

The table below demonstrates the increase in Arete Discoveries' value from 2018 to 2023. During this time, Arete's value has more than tripled. The table illustrates a \$500,000 investment realizing the opportunity to cash out the original commitment and carry the residual \$1,304,413 investment in Arete's future. This partial exit may be realized at a milestone funding event.

2018 % of Probability	2023 % of Probability	2023 ALS Therapeutic Market Size	1% of 2023 Market Size	Original Investment	% of Ownership	3 X Multiple of Probability	3 X Multiple of Investment	Forecasted ALS Market 2027	10-4-2023 Valuation	2023 Value of Investment	Remaining Residual Investment
1.0%	3.0%	\$694,040,000	\$6,940,400	\$500,000	7.20%	\$20,821,200	\$1,500,000	\$834,890,000	\$25,046,700	\$1,804,413	\$1,304,413

# Arete Progress to Date

ITEM	COMPLETE	IN PROGRESS	TO DO	Comments
Drug target identified	✓			
Bio-activity Screening	✓			
Lead Candidate Identification	✓			
Proof of Concept Studies	✓			Highly successful
Drug Tolerability Studies		✓		2 studies without observed AE's
Separate Indication Validation	✓			MS model of EAE
Design Variant for IP Protection	✓	✓	✓	Always in review and ongoing
File Provisional Patents	✓	✓	✓	Always in review and ongoing
File National and PCT Patents			✓	
Continue Building IP Moat		✓	✓	Always in review and ongoing
Select CDMO		✓		
Select IND CRO	✓			WuXi DMPK Division
Initiate IND Studies (rat, NHP)			✓	WuXi DMPK Division
Recruit Investable "C" Suite Team		✓		
Establish Funding Goals		✓	✓	Determine how much and when
Raise Funding			✓	