



**Enzymes that Unlock  
Your Next Discovery**

SEB Healthcare Seminar

November 20, 2024  
CEO Michael Akoh  
CFO Børge Sørvoll



# Overview

## A Norwegian biotech with growth potential

### Worldclass Products

- Novel enzymes for advanced therapies and molecular diagnostics
- Strong reputation in Molecular Tools and Bioprocessing segments.
- Net Promoter Score = 84

### Segment & Customers

- Targeting segments with high growth potential
- Customers are life science tools companies, CDMO, Pharma and Biotech

### Talent & Culture

- Management team committed to creating a culture where exceptional innovation thrives
- World class R&D team
- Strong manufacturing capabilities complying to ISO13485 and GMP
- 53 employees, HQ in Tromsø
- Direct sales in US & Europe

### Strong Financials

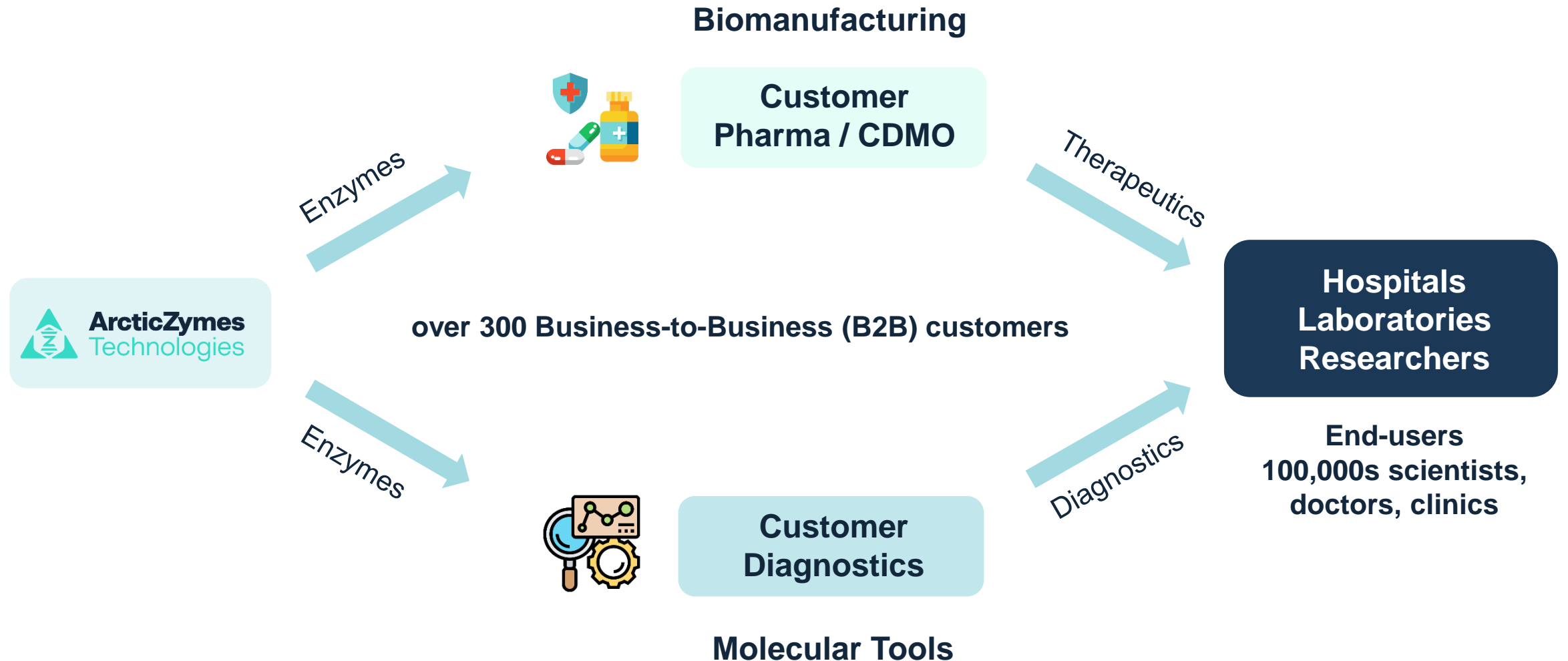
- Margins > 90% all products
- Recurring revenue streams – sticky business
- Sales of 119 MNOK (2023)
- No debt – 240 MNOK in Cash reserve
- Listed on the Norwegian Stock Exchange



**ArcticZymes**  
Technologies

# B2B Value chain

## Biomanufacturing and Molecular Tools customers



# Best-in-class Enzymes

Custom and OEM solutions – to meet customer's needs

## Biomanufacturing (Therapeutics)

Viral vector, gene therapy and protein production

Removal of nucleic acids during protein production, vaccine manufacturing and viral vector preparation.



SAN HQ  
SAN HQ GMP



M-SAN HQ

## Molecular Workflows (Research & Molecular Diagnostics)

Sample Isolation

Ensure free nucleic acids, readily available for amplification, by removal of interfering proteins.



ArcticZymes Proteinase

Enrichment

Increase ability to detect your target, by removal of unwanted nucleic acids and carry-over contamination



HL-dsDNase



Cod UNG



HL-SAN



dsDNase

Amplification

Perform sensitive amplification of your target with isothermal amplification (i.e., LAMP) or PCR



IsoPol® Polymerases



AZtaq™ DNA  
Polymerase



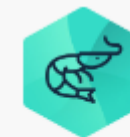
AZscript™ Reverse  
Transcriptase



T7 Polymerase

Modification and  
Downstream Analysis

Accurate and reliable analysis by Sanger sequencing or NGS



Shrimp Alkaline  
Phosphatase



T4 DNA Ligase



Exonucleases



R2D Ligase

# Strategic priorities

Building a platform for long term growth – the journey has started

## Short Term

1

Transformation to become customer centric

Commercialization – strengthen commercial arm significantly

Channel development through partners (CDMO/OEM)

Scientific marketing (White papers, Talks and Publications)

2

GMP upgrade of current enzymes

Ability to expand usage in more drug development phases  
2 new GMP nucleases plus an ELISA kit in development

3

Relaunch of current Molecular tools enzymes

Application data and positioning

## Long Term

1

Build Advanced therapies biomanufacturing pipeline to broaden and diversify portfolio

RNA enzymes & NextGen SAN

2

Develop/commercialize new Molecular Tools enzymes

Sample prep, amplification and synthetic biology

3

M&A Opportunities

Build portfolio

Strengthen manufacturing capabilities

Enhance commercial channels



**Partnerships  
Biomanufacturing and  
molecular tools**



# Increasing Commercial Reach

## OEM partnerships

- ◆ **Expanding commercial channels:**
  - ◆ Selling direct as well as through partners
- ◆ **Active Partner Engagement:**
  - ◆ Ongoing discussions with multiple potential partners
- ◆ **Supply and Rebranding:**
  - ◆ ArcticZymes to provide bulk material for repackaging and rebranding under partner's label
- ◆ **Term Sheet Negotiations:**
  - ◆ Progressing with one partner
- ◆ **Execution Timeline:**
  - ◆ Term sheet expected to finalize by early Q1, contingent on successful negotiation
- ◆ **Revenue Impact:**
  - ◆ Anticipated contribution starting in Q2/Q3 2025



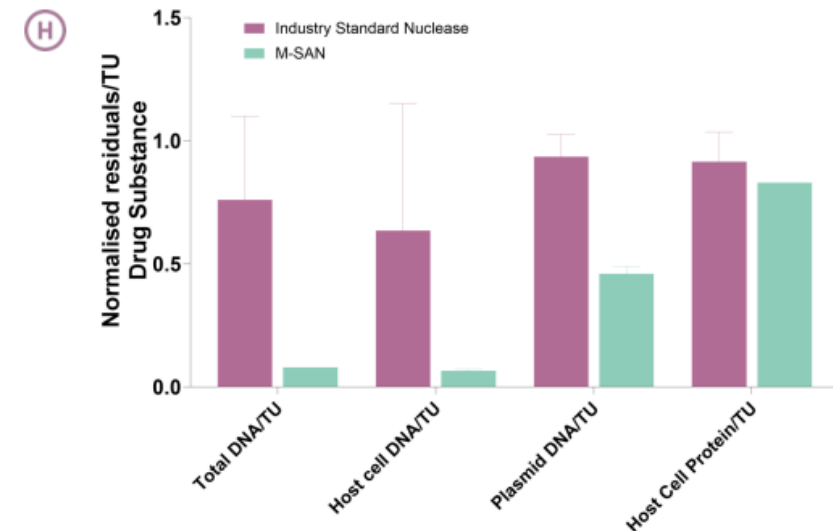
# CDMO opportunities

## Becoming the standard nuclease on a CDMO platform

- Trend in the CGT space - a return to the CDMO model
- Through a partnership with CDMOs we will expand our reach significantly into several projects/clients
- M-SAN and SAN has been tested in an initial study with good data outcome at CDMO
- M-SAN enhances
  - Downstream recovery
  - Reduces DNA contamination
  - Minimizes vector aggregation, leading to cleaner, higher-quality lentiviral vectors
- Goal for CDMO is to start utilizing M-SAN for new projects next year on their platform

### M-SAN demonstrated superior performance compared to the Industry Standard Nuclease when integrated into OXB's LV production process.

- Lower pressure during clarification after M-SAN treatment in the bioreactor (See Figure D).
- Higher Tangential Flow Filtration (TFF) flux rates (see Figure E).
- Comparable functional titre through downstream processing (See Figure F).
- Effective removal of total, host cell and plasmid DNA following M-SAN treatment in the bioreactor (See Figure G).
- Reduced DNA contaminants in the drug substance (See Figure H).
- Similar particle size in the drug substance after M-SAN incorporation (See Figure I).







**The future  
portfolio -  
Diversification**

# RNA based therapeutics

## Targeting a broader Advanced Therapies Market

- Enzymes are **key** in development, analytics and manufacturing process of mRNA
- AZT is now exploring **new innovations** in the field of RNA therapeutics through RCN funded collaboration project.
- First major innovation is a sequence specific RNA cleaving enzyme enabling controlled fragmentation of RNA
- First patent filed February 7, 2023** – further filing ongoing to secure broader IPR and lead market
- Multiple applications are possible, currently testing use for improving analytic methods for mRNA
- In contact with numerous companies** with ongoing testing at 7 sites

*Nucleic Acids Research*, 2024, **52**, e90  
<https://doi.org/10.1093/nar/gkae779>  
Advance access publication date: 13 September 2024  
**Methods**



### Using nucleolytic toxins as restriction enzymes enables new RNA applications

Ulli Rothweiler<sup>1,\*</sup>, Sigurd Eidem Gundesø<sup>1</sup>, Emma Wu Mikalsen<sup>1,2</sup>, Steingrim Svenning<sup>1</sup>, Mahavir Singh<sup>3</sup>, Francis Combes<sup>4</sup>, Frida J. Pettersson<sup>4</sup>, Antonia Mangold<sup>1</sup>, Yvonne Piotrowski<sup>1</sup>, Felix Schwab<sup>1</sup>, Olav Lanes<sup>1</sup> and Bernd Ketelsen Striberny<sup>1,\*</sup>

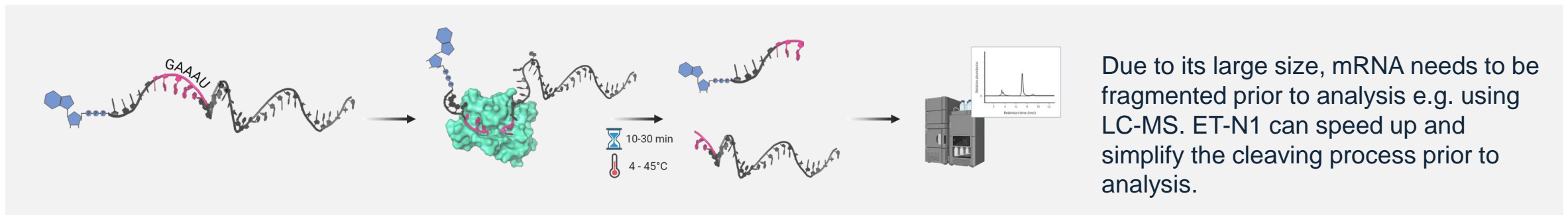
<sup>1</sup>ArcticZymes Technologies ASA, Sykehusveien 23, 9019 Tromsø, Norway

<sup>2</sup>UiT – The Arctic University of Norway, Faculty of Biosciences, Fisheries & Economics, Muninbakken 21, 9019 Tromsø, Norway

<sup>3</sup>Molecular Biophysics Unit, Indian Institute of Science, Bengaluru 560012, India

<sup>4</sup>Department of Biotechnology and Nanomedicine, SINTEF AS, Richard Birkelands vei 3, N-7034 Trondheim, Norway

\*To whom correspondence should be addressed. Tel: +47 77 64 89 00; Fax: +47 77 64 89 01; Email: ulli.rothweiler@arcticzymes.com  
Correspondence may also be addressed to Bernd Ketelsen Striberny. Email: bernd.striberny@arcticzymes.com



Thank you

