Neutropenia Program

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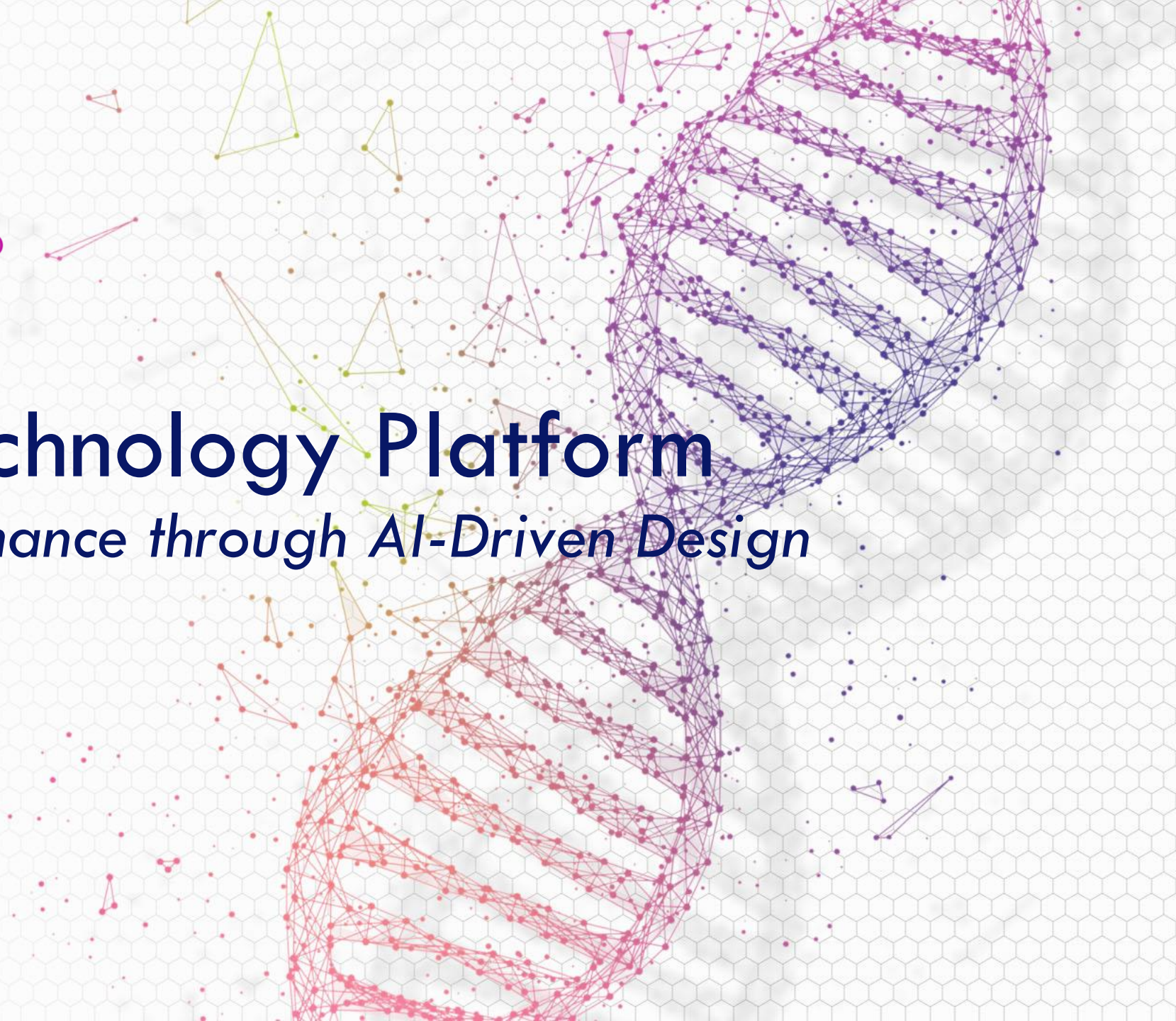
OMNI™ Technology Platform

Superior Performance through AI-Driven Design



AnGes

About EmendoBio

- Founded in U.S. in 2016 by scientists from the Weizmann Institute, Israel
- Founding investors: OrbiMed and Takeda Ventures
- AnGes became a majority shareholder in December 2020

Management

Naoya Satoh, PhD
President & CEO

Assaf Sarid
CFO

Idit Buch, PhD
VP, Computational Biology

Roy Sirkis, PhD
VP, Biomaterials Development and Production

Board of Directors

Ei Yamada, PhD
AnGes

Naoya Satoh, PhD
AnGes

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UW Medical School

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Clinical Geneticist
Columbia University

Harry Malech, MD
Chief Genetic Immunotherapy, NIH

David Rawlings, MD
Director Immunity and Immunotherapies, SCRI

Andrew Kung, MD PhD
Chair Dept. Peds. Sloan Kettering

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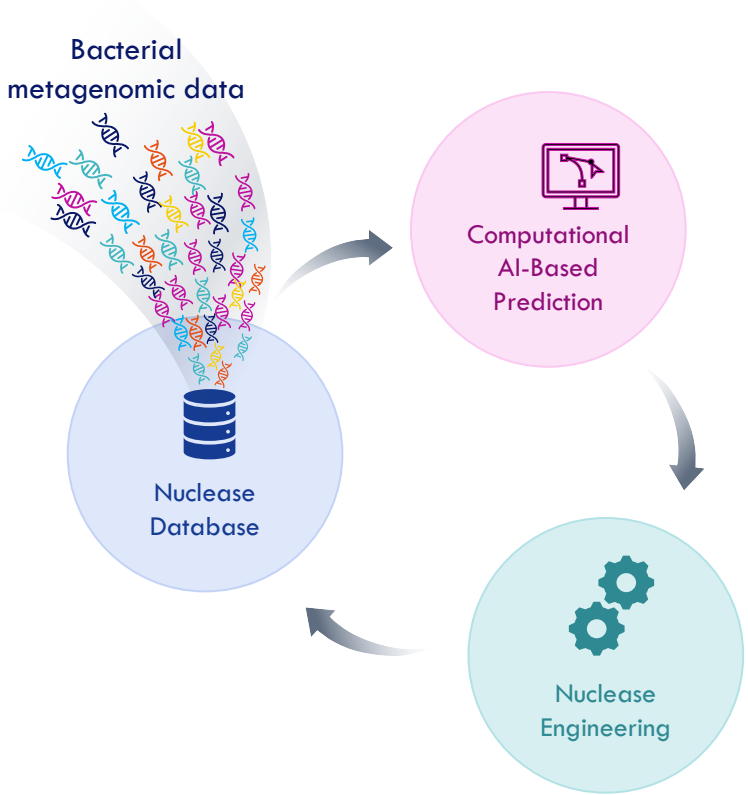
OMNI™ Platform Offers a Variety of Gene-Editing Solutions

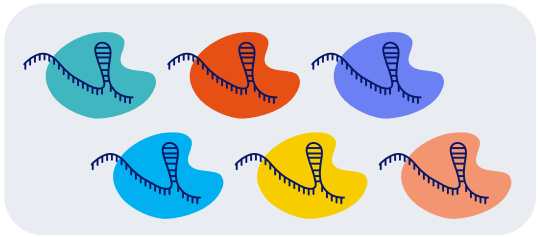
Synergistic discovery, engineering and computational technologies combine to produce a portfolio of high-performance OMNI™ nucleases

EmendoBio's Platform



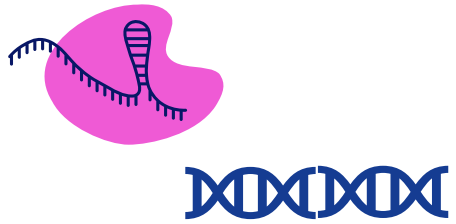
Panel of Engineered OMNI™ Nucleases

- Novel
- Highly active
- Highly specific



Optimal Therapeutic Compositions per target

- High safety profile
- Expanded range of applications
- Freedom to operate



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OMNI™ Panel Genome Accessibility

Nuclease Portfolio

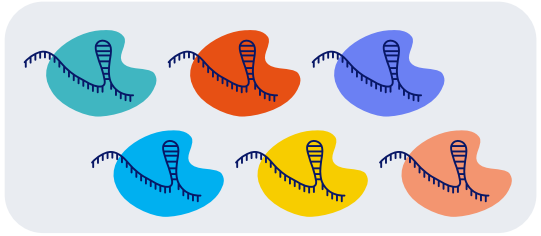
10,000 discovered nucleases

300 validated in vitro

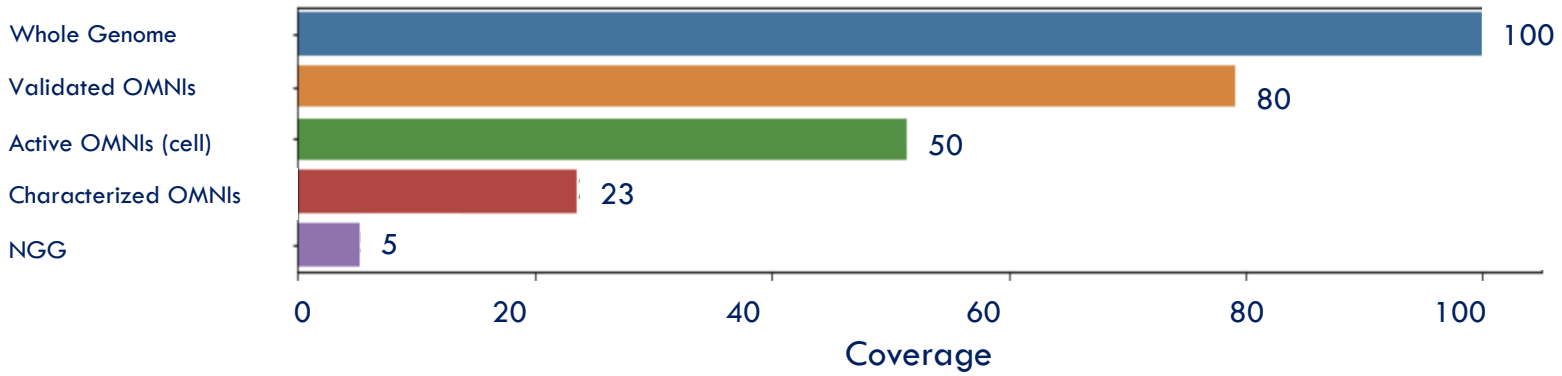
80 shown active in cells

12 characterized

2 engineered



OMNI™ Genomic PAM Coverage



The diversity of PAM sites of the OMNI™ nucleases overcomes PAM constraints and significantly widens genome accessibility, making **any gene targetable**

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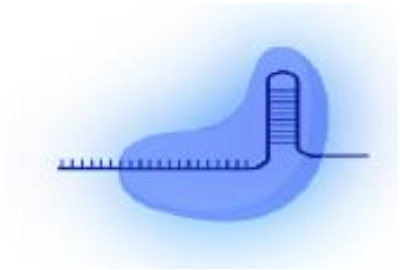
Nuclease Engineering Platform

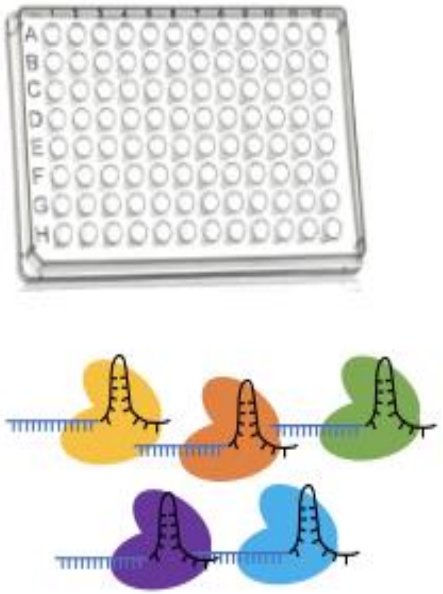
OMNI™ nuclease (from panel)

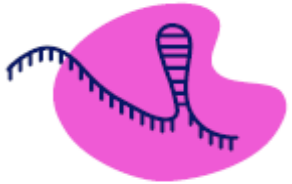
AI based engineering for variant library generation

Libraries of nuclease variants

Screening in mammalian cell line







Highly Active and Specific
Optimized OMNI™ Variants

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Pipeline

Disease Area	Program	Target	Indication	Approach	Research	Lead Optimization	IND-Enabling	Phase 1
Hematology	EMD-101	ELANE	Severe Congenital Neutropenia	Allele-specific ex vivo excision				
Cardiovascular	EMD-301	LDLR	**ASCVD not at LDL-C goal** Including Heterozygous Familial Hypercholesterolemia (HeFH)	In vivo excision				
	EMD-302	ANGPTL3	**ASCVD not at LDL-C goal** Including Homozygous Familial Hypercholesterolemia (HoFH)	In vivo KO				
Ocular	EMD-201	SARM1	Glaucoma	In vivo KO				
	EMD-202	RHO	Retinitis Pigmentosa	In vivo excision				
	EMD-203	RPE65	Retinitis Pigmentosa	In vivo excision				

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EMD-101 Targeting *ELANE*

For The Treatment of Severe Congenital Neutropenia

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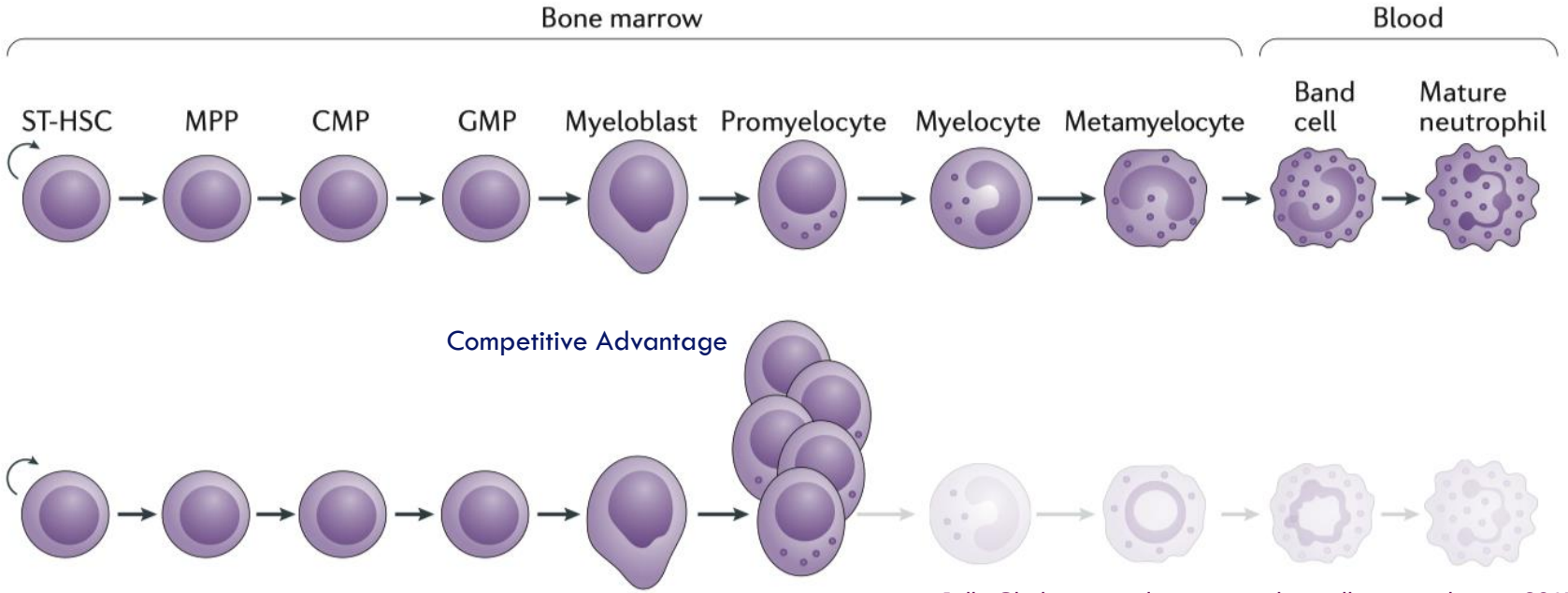
Competitive Advantage

Severe Congenital Neutropenia (SCN)



Julia Skokowa et al, nature reviews disease primers, 2017

- Neutrophil maturation disorder resulting in severe and recurrent infections
- Disease prevalence 1/400,000 worldwide
- Over 200 *ELANE* heterozygous dominant mutations
- High Unmet Need
  - Lifelong daily injection of G-CSF: Severe side effects, increased risk for AML/MDS, not curative
  - Allo-transplants: Graft failure and acute GvhD

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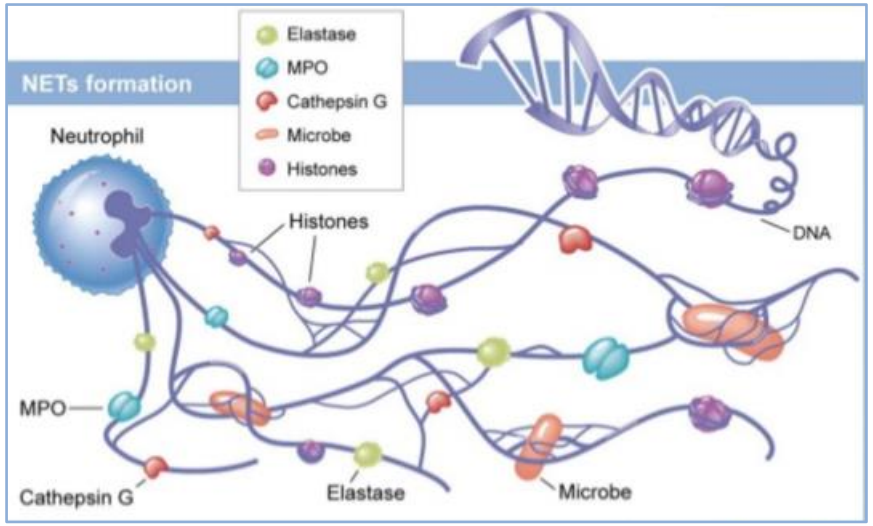
Target Indications and Market Opportunity

ELANE-related severe congenital neutropenia (SCN)



A neutrophils depletion disorder (<0.5×10^{9}cells/L), causing severe recurrent infections

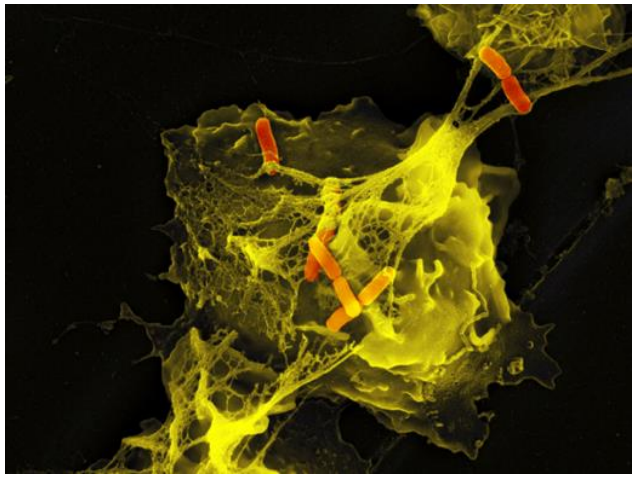
- Neutrophil Elastase (NE), a serine protease, part of the NET trap
- Dominant mutations cause protein misfolding, ER stress and maturation arrest
- Prevalence 1:200,000*, under-diagnosed

Patient Population

- **1,600 patients in the U.S., 40,000 patients worldwide**

Market Size

- **$ 2-3B in the U.S.**



*Genetic Home Reference, NIH US National Library of Medicine: https://ghr.nlm.nih.gov/condition/severe-congenital-neutropenia#statistics.
Colored scanning electron micrograph showing stimulated neutrophil with NETs and trapped Shigella bacteria. ©Max Planck Institute for Infection Biology.

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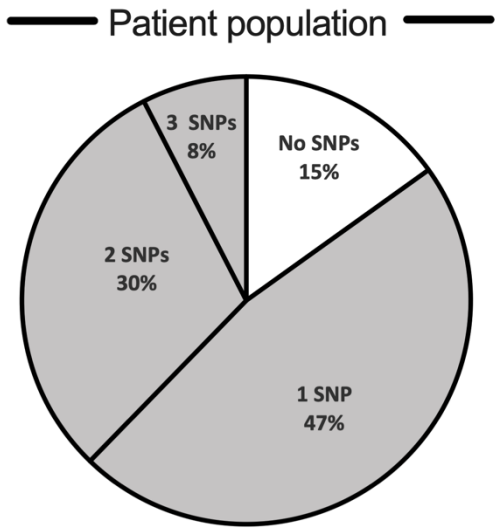
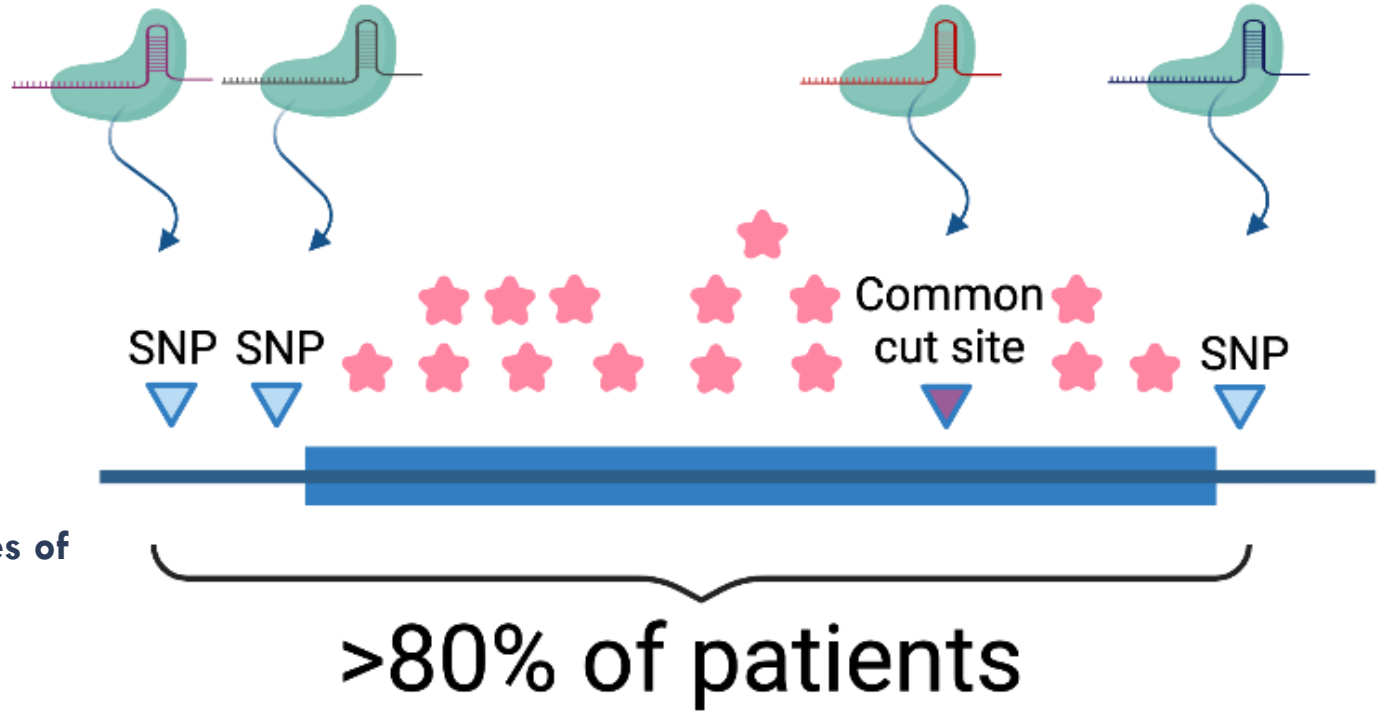
SNP-Based Mono Allelic Excision Strategies for SCN





Emendo's unique approach:
A CRISPR-based nuclease targeting heterozygous sites of SNPs linked to the majority of *ELANE*-mediated SCN mutations

>80% of SCN patient population are heterozygous to at least one SNP and could be treated with Emendo's compositions

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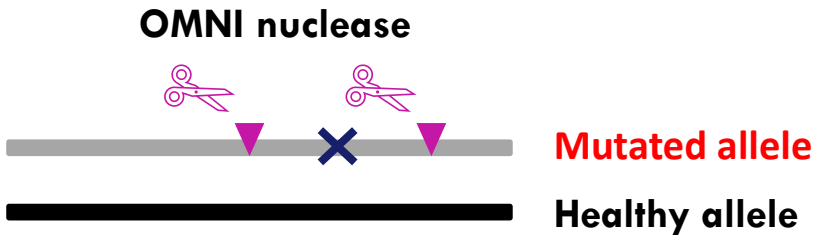
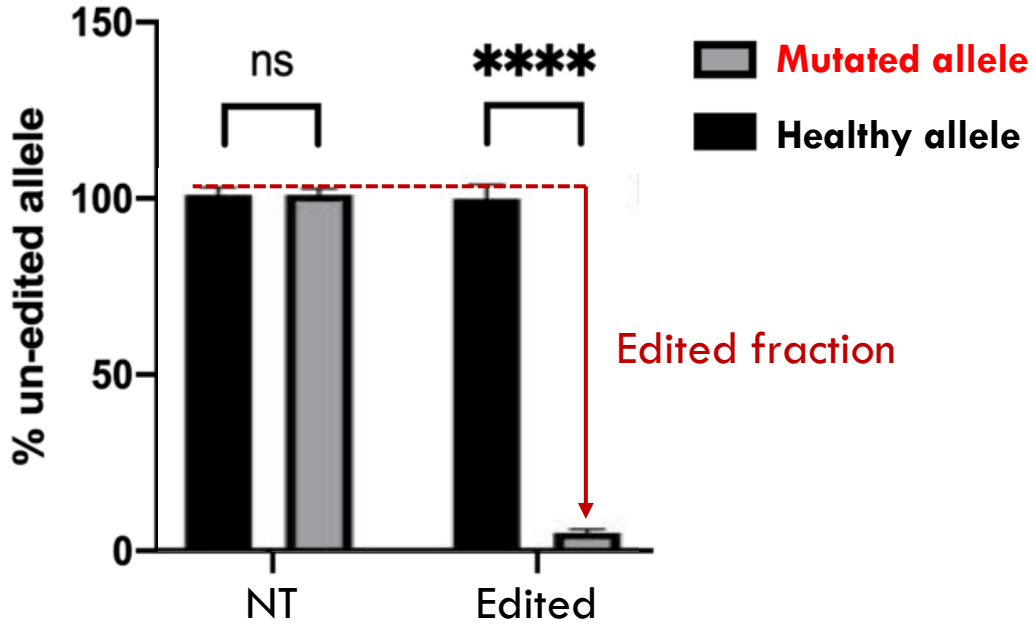
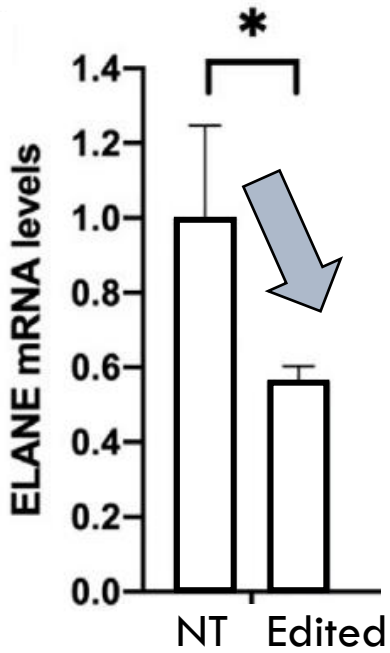
Mechanism of Action

ELANE gene



Mono allelic knockout of mutated *ELANE* gene caused the degradation of the mutated *ELANE* mRNA





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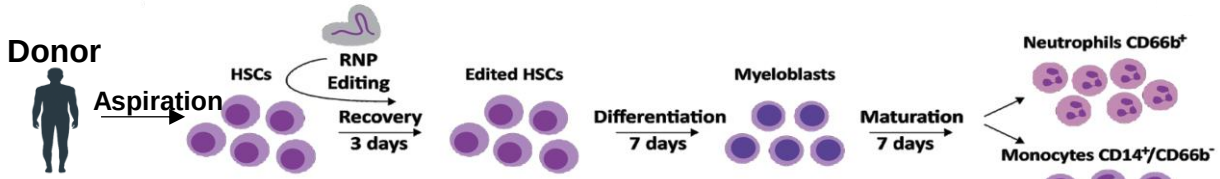
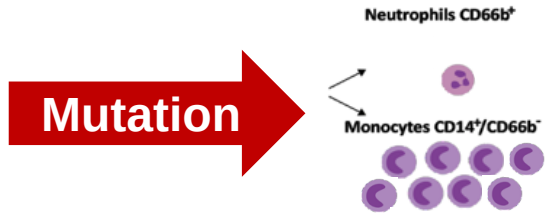
Preclinical Data of Proof of Concept

Recovery of neutrophils differentiation by editing of mutant *ELANE* allele

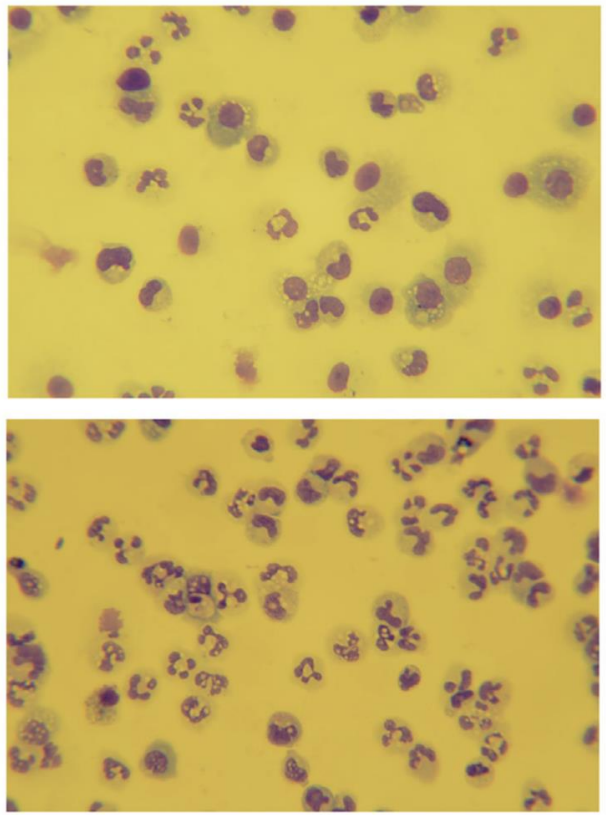


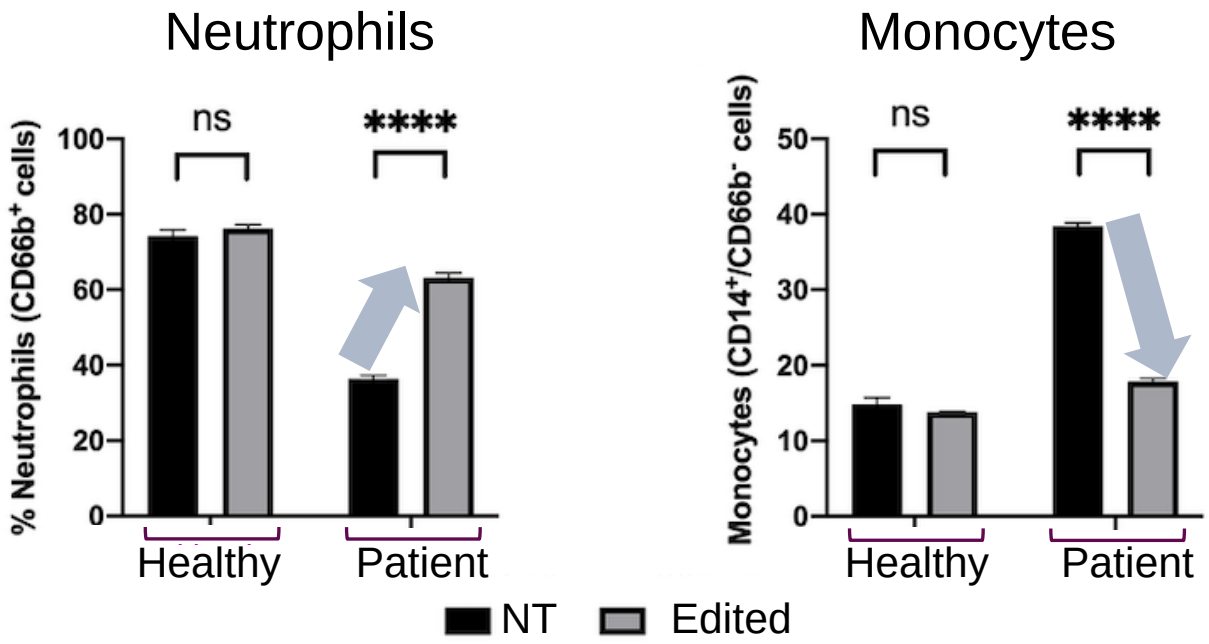


Normal **Patient**

NT

Edited





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Summary

EMD-101 targeting *ELANE*

- EMD-101 provides a highly specific solution for autosomal dominant mutations in ELANE
- Proof of concept established
  - Knocks out the expression of the mutant *ELANE* allele by ~85% leaving the healthy allele intact
  - HSCs from patients that were treated with EMD-101 enabled differentiation into neutrophils, demonstrating the potential for significantly ameliorating the disease
- Overall, EMD-101 provides a potentially safe and effective treatment for SCN
- Pre-IND meeting completed

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