NEWCELX

TOWARD A CURE FOR TYPE 1 DIABETES



REGENERATIVE MEDICINE TO CURE TYPE 1 DIABETES

Leading The Evolution of Type 1 Diabetes Cure With a Scalable Platform Producing Enriched, High-quality Stem Cell–derived Islets

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This presentation contains express or implied forward-looking statements within the Private Securities Litigation Reform Act of 1995 and other U.S. Federal securities laws. For example, NewCelX Ltd. ("NewCelX," "we," "our" or "us") is using forward-looking statements when we discuss the timing and outcome of our planned clinical trials, including the Phase IIa trial of AstroRx® in ALS; our expectations regarding the pre-IND and IND filings for IsletRx; the development and regulatory path for the DOXA platform; our ability to obtain regulatory approvals; our ability to secure and maintain patent protection; our plans for collaborations and partnerships; our anticipated market opportunities; and, our prospects for future growth and revenue generation. These forward-looking statements and their implications are based on the current expectations of our management only and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: changes in technology and market requirements; we may encounter delays or obstacles in launching and/or successfully completing our clinical trials; our products may not be approved by regulatory agencies, our technology may not be validated as it progresses further and its methods may not be accepted by the scientific community; we may be unable to retain or attract key employees whose knowledge is essential to the development of our products; unforeseen scientific difficulties may develop with our process; our products may wind up being more expensive than we anticipates results in the laboratory may not translate to equally good results in real clinical settings; results of preclinical studies may not correlate with the results of human clinical trials; our patents may not be sufficient; our products may harm recipients; changes in legislation may adversely impact us; inability to timely develop and introduce new technologies, products and applications; loss of market share and pressure on pricing resulting from competition, which could cause our actual results or performance to differ materially from those contemplated in such forward-looking statements. Except as otherwise required by law, we undertake no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. More detailed information about the risks and uncertainties affecting us is contained under the heading "Risk Factors" in our annual report on Form 20-F for the year ended December 31, 2024 filed with the Securities and Exchange Commission (SEC), which is available on the SEC's website, www.sec.gov, and in subsequent filings made by us with the SEC, including under the heading "Risk Factors" in our proxy statement/prospectus, filed with the SEC on September 10, 2025.

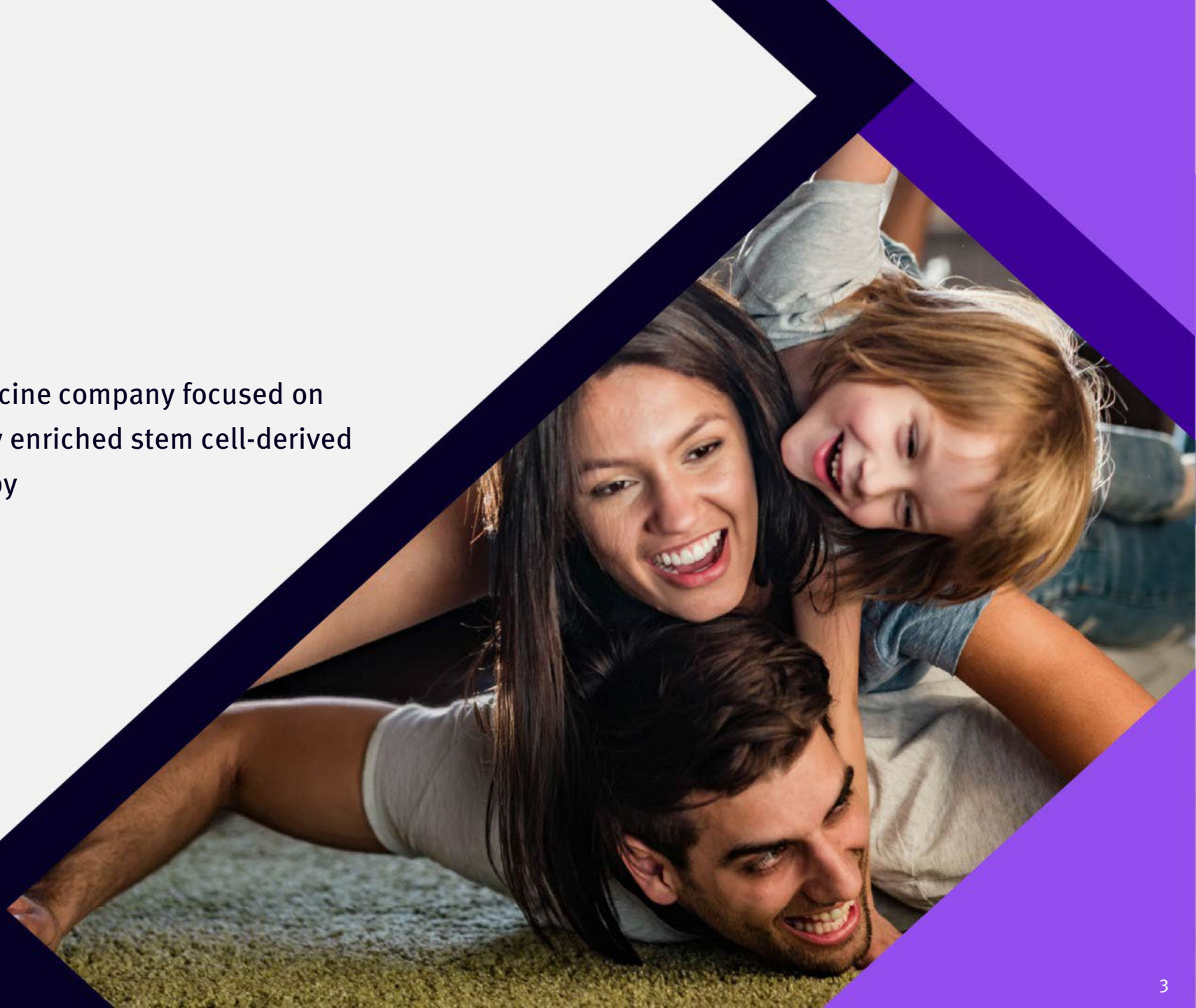
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Cure Type 1 diabetes

We are a clinical stage regenerative medicine company focused on Type 1 Diabetes Cell Therapy using highly enriched stem cell-derived islets as scalable cell replacement therapy



The NewcelX Factor Today, Value Driven

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CORE PLATFORM
Stem Cell Technology

- GMP Manufacturing
- Clinical-Grade Bio-Banks
- Off-the-Shelf Therapies
- Scalable Multi-Indication Platform

PRIMARY VALUE DRIVER
Type 1 Diabetes

- Insulin-dependent diabetes
- IND-enabling
- Key partnering focus

STRATEGIC ALLIANCES

PLATFORM VALIDATION
Neurology – ALS
AstroRx®

- Clinical-stage- FDA approved IND for Phase 2a
- Proof of concept for stem cell platform

ADJACENT CNS PLATFORM
DOXA (Dual Orexin Agonist)

- Sleep disorders
- Neurodegenerative disease optionality

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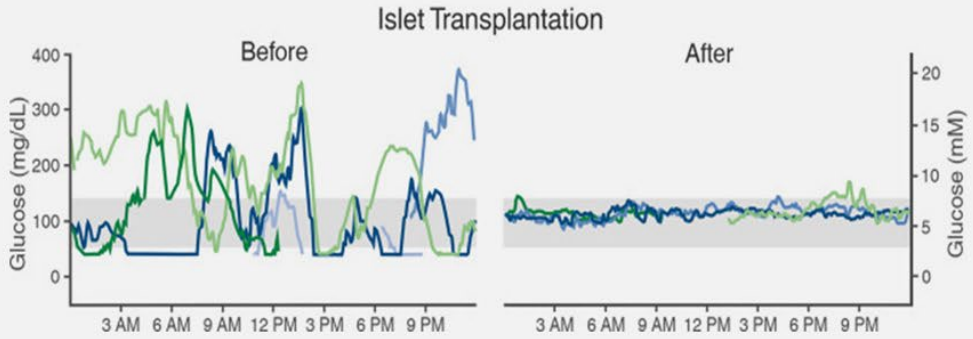
Cell Therapy in Type 1 Diabetes: Unmet Need

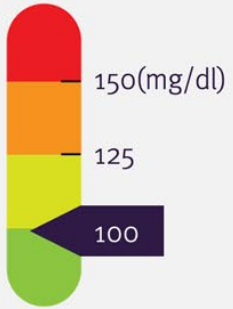


Insulin therapy and glucose management manages symptoms, but are not a cure

Cell therapy for diabetes = Cure

Islet transplantation patients achieve complete insulin independence

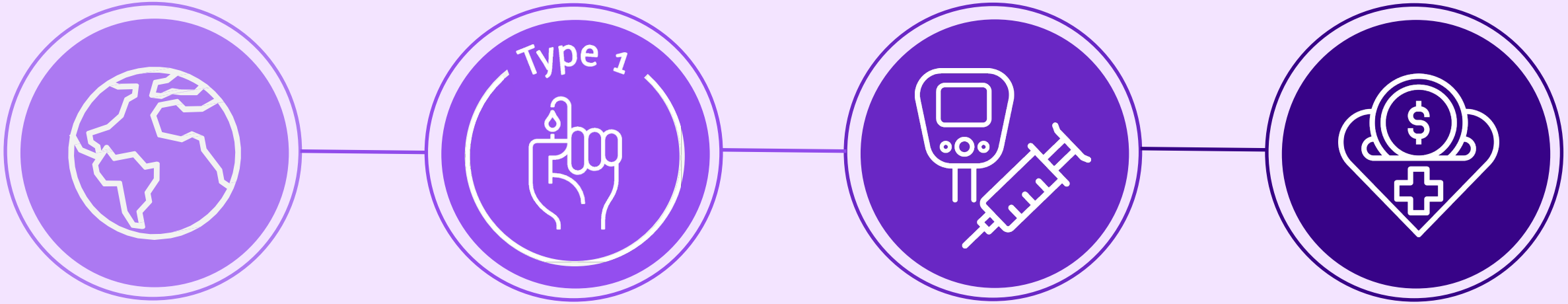




1. Cell Metab . 2019 Mar 5;29(3):545-563. doi: 10.1016/j.cmet.2019.02.007.

Global Market and Facts For Type 1 Diabetes

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9.5 MILLION PEOPLE	1.8 MILLION	174,000	813B$
Living with Type 1 Diabetes worldwide [1]	Children and adolescents below 20 years have type 1 diabetes [2]	Premature Deaths attributed to Type 1 Diabetes [3]	Lifetime cost in US for health expenditure in Type1 diabetes patients [4]

The global insulin pump market size was valued at USD 6.08 billion in 2024 and is projected to grow to USD 21.65 billion by 2032. North America dominated the insulin pump market with a market share of 57.79% in 2023[5].

An Active Market

Key Recent Transactions, Developments & Validations

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2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026

2019	2021	2021 / 2022	2022	2023	2025	2026
Semma Therapeutics	Sana Biotechnology	Lineage Cell Therapeutics / Roche (Genentech)	ViaCyte	Vertex / CRISPR Therapeutics	SAB Bio private placement	Aspect Biosystems /Novo Nordisk
Diabetes	Diabetes and cell therapy	Diabetes and Cell Therapy	Diabetes	Diabetes	Diabetes	Diabetes
Acquired by Vertex **$950M** Preclinical islet cell therapy[1]	IPO – Nasdaq **$6.4B** Market Cap at IPO[2]	Global collaboration & license (OpRegen®) **$50M** upfront **$670M** total potential value[3]	Acquired by Vertex **$320M**[4]	Vertex will get non-exclusive rights to CRISPR Therapeutics' CRISPR/Cas9 gene editing technology. **$230M**[5]	**$175 M** upfront **$284M** total potential value[6]	Lead asset licensing deal **$75M** upfront **$750M** total[7]

Major Technology Competition – Type 1 Diabetes

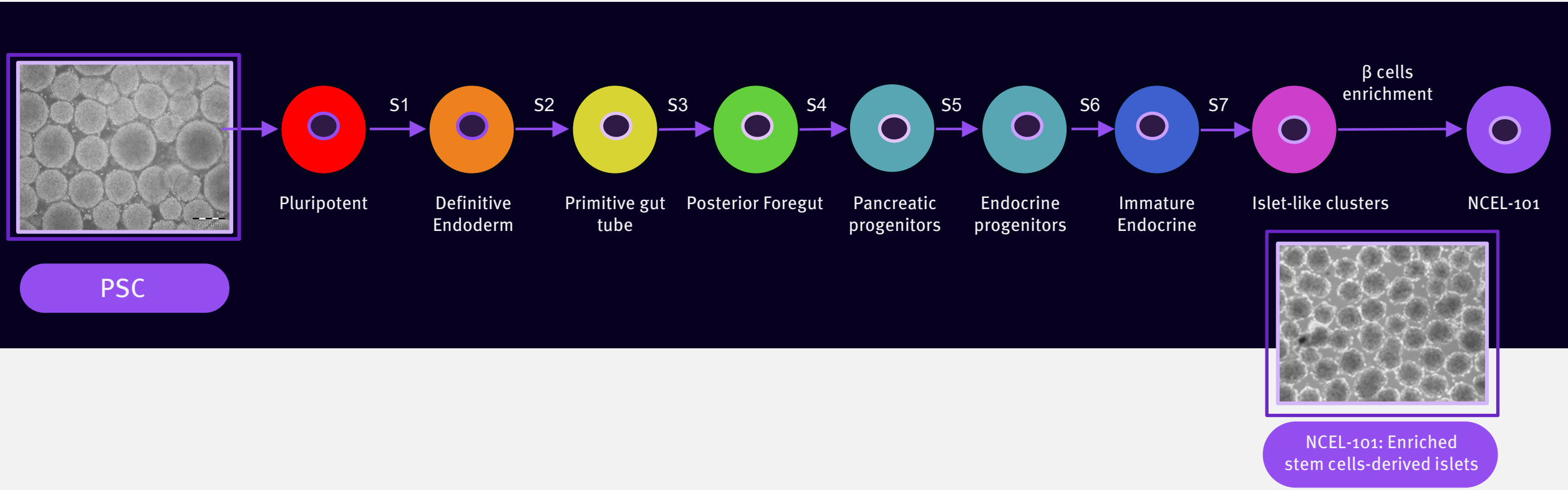
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Company	Product	Development stage	Cell source	Technology
Cell Therapy Technology Competition				
Vertex[1]	**VX-880**	Phase 1-2-3	Stem cells-derived Islets	Liver infusion + immunosuppression
Seraxis[2]	**SR-02**	Phase 1	Stem cells-derived Islets	Omentum + immunosuppression
Sigilon (Ely Lilly)[3]	**SIG-002**	Preclinical	Stem-cell derived islets	Microencapsulation
Sernova[4]	**Stem-cell derived islets in Cell Pouch**	Preclinical	Stem-cell derived islets	Cell Pouch™ bio-hybrid organ
Aspect Biosystems (+Novo Nordisk)[5]	**Bioprined islets**	Preclinical	Stem-cell derived islets	Bioprinting
Sana Biotechnology[6]	**SC451**	Preclinical	Stem-cell derived islets	Immune evasion by genetic modification

NCEL-101: Functional Islet Cells to cure diabetes from unlimited source - GMP PSCs line

Differentiation of PSCs into islet-like clusters

7-stage protocol, ~28 days for production
Recapitulating pancreatic development stages
Final enrichment step: capturing the elite cells for optimized clinical performance



Flagship Diabetes Program



NCEL-101 With Eledon Pharmaceuticals (“Eledon”)

- Functional enriched insulin-secreting islets
- Physiologic glucose-responsive insulin release
- Unlimited and standardized cell supply
- Efficacy and safety in preclinical studies
- Durable – long term function in diabetic animal models

Immune Protection Soultion By Eledon

- Next generation immune supression drug: anti-CD40L monoclonal antibody, tegoprubart (AT-1501)
- Clinical experience from over 100 transplant patients treated with tegoprubart
- The immune modulation component is intended to enhance durability and graft survival of the cells

Eledon Pharmaceuticals

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Combination treatment

Streamlined Regulatory Pathway

IND in Q1 2027 | FIH Q2 2027

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Co-development & Projects Pipeline

Indication	Developments
Type 1 Diabetes	iTOL-102
	NCEL-201: In house product using encapsulation
	NCEL-301: Collaboration project for device
	NCEL-007: Collaboration project for hypo immune gene edited cells

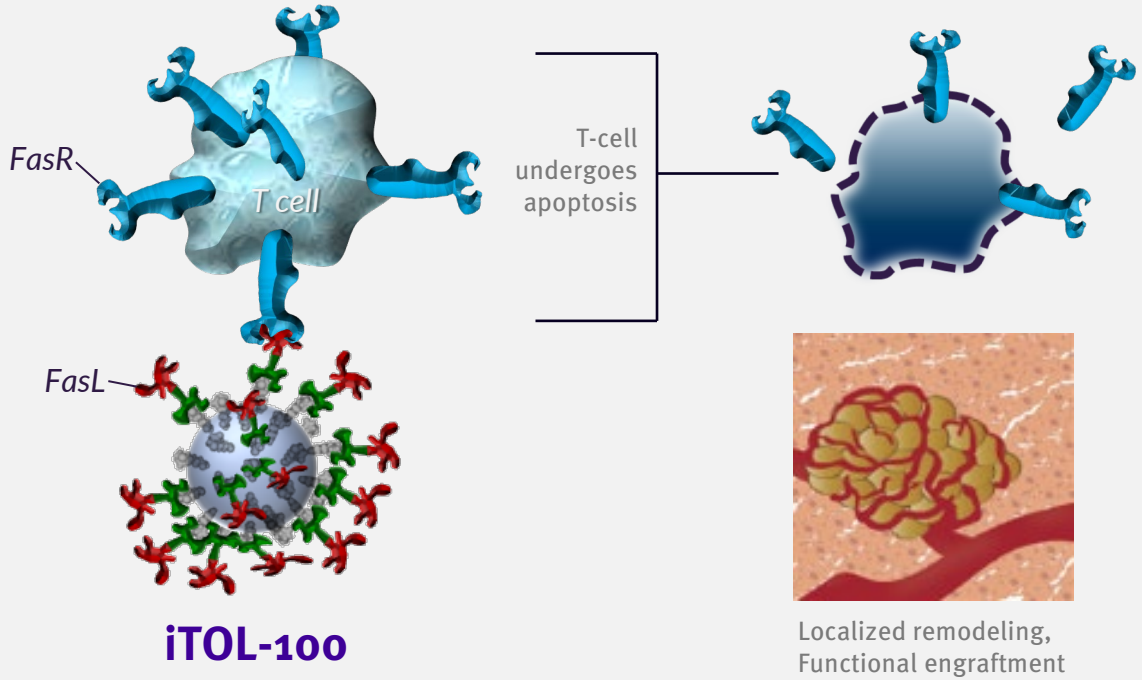
iTOL-102: Mechanism of Action

Durable, Localized Immune Tolerance

- Regenerative medicine without the need for life-long immunosuppression
- Leverages the naturally occurring protein, Fas Ligand (FasL)
- Creates localized immune privilege environment
- BIRD Grant funded (~$1M)
- Successful POC results (Q2 2024)
- Breakthrough designation by DRI
- Successful Pre-IND Meeting with the FDA (Q1 2025)

Mechanism of Action

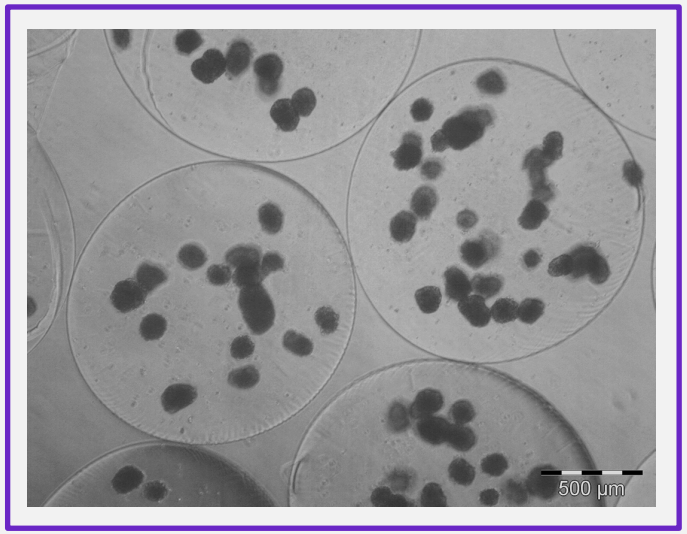
Immobilized and co-localized FasL

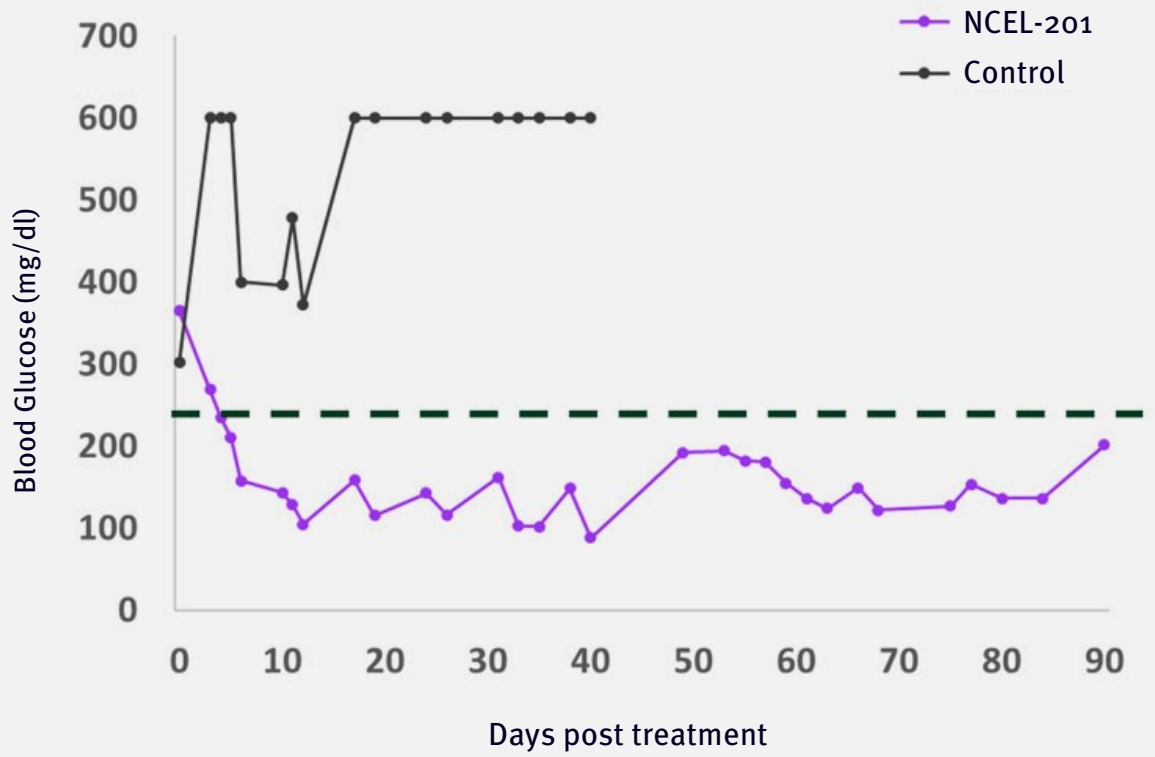


In House Product Development: NCEL-201 Preclinical Efficacy

NCEL-201 treated diabetic mice (STZ) demonstrated balanced and normal blood glucose levels

- Long-term therapeutic effect was achieved in an immunocompetent animal model (C57BL/6 mice)
- NCEL-201 cells are well protected from host immune system

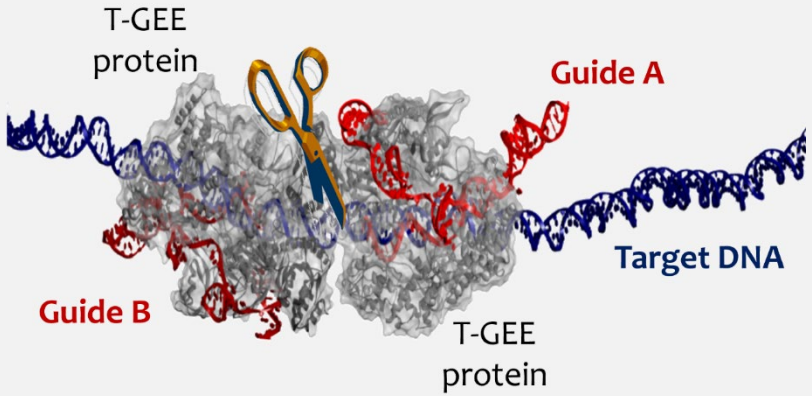




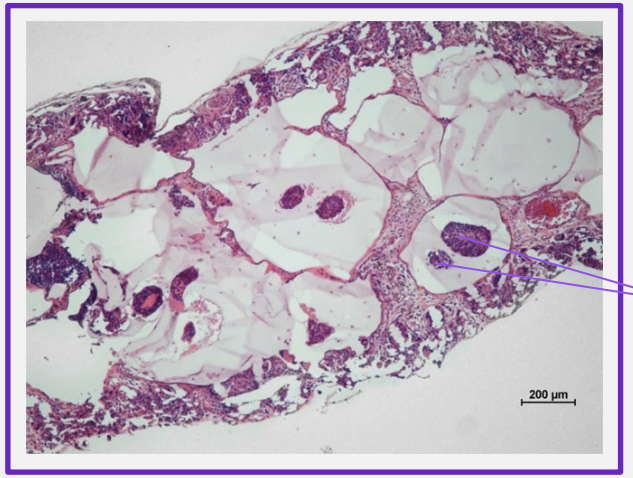
https://www.frontiersin.org/journals/endocrinology/articles/10.3389/fendo.2021.635405/full

Next Generation Cell Line
NCEL-007– Hypoimmune Cells

- Co-Development with TargetGene Biotechnologies Inc. Genome editing to evade immune system recognition allowing graft persistence.
- Using precise, validated, gene editing platform, with minimal off-target editing
- Enables the production of hypo immune cells for the treatment of Type 1 Diabetes
- No need for immune suppression
- Increased safety and efficacy



NCEL-301



Intact
NCEL-301 cells

- **Bioengineered 3D Printed Device:** NCEL-301 cells can be implanted in a bioengineered device featuring a 3D printed scaffold for easier surgical retrieval and immuno-isolation
- **Innovative 3D Printing Process:** The scaffold utilizes melt electrospinning writing (MEW), a novel solvent-less technique that creates micrometer-thin fibers with highly controllable architectures
- **Successful Preclinical Results:** Encapsulated islets in scaffolds demonstrated production of human insulin and maintained viability for approximately 3 months in preclinical studies

Proprietary expansion and differentiation processes

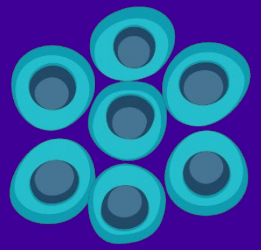
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GMP quality Starting Material.



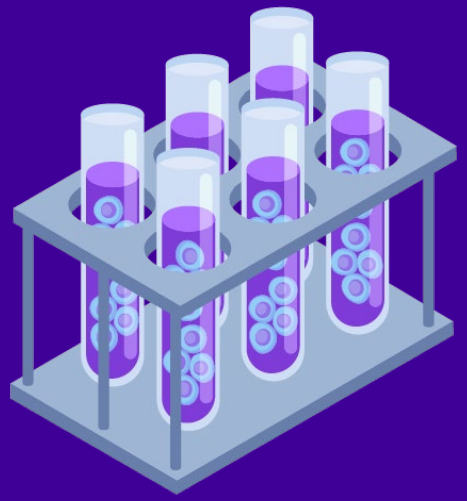
Clinical-grade Embryonic Stem Cell line

Pluripotent Stem Cell Expansion



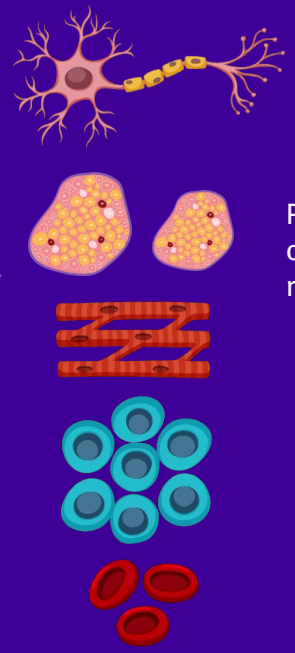
Large scale

Bio-Banking



Unlimited # of Pluripotent Stem Cell Bio-banks

Expansion and differentiation protocols



Potential wide range of cells treating a wide range of diseases.

Key Platform Attributes

- Renewable pluripotent cell source enabling consistent supply
- No genetic modification required (unless indication-specific)
- Residual pluripotent cells controlled below detection limits
- Scalable for late-stage clinical development and commercialization
- Supports multi-indication expansion from a single platform

Proprietary Guided Differentiation (in-house cGMP)

- Controlled differentiation into target cell types
- Core focus:
  - Pancreatic / islet-like cells (Type 1 Diabetes)
- Platform validation:
  - Astrocytes (ALS – clinical-stage)
- Release-tested, ready-to-use formulation

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Proof of platform product execution from bench to bed: FDA-approved IND, phase 2a using AstroRx® cell therapy product for clinical trial in ALS patients



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AstroRx®

Astrocytes Cell Therapy Treatment for Neurodegenerative Diseases a Validated Platform



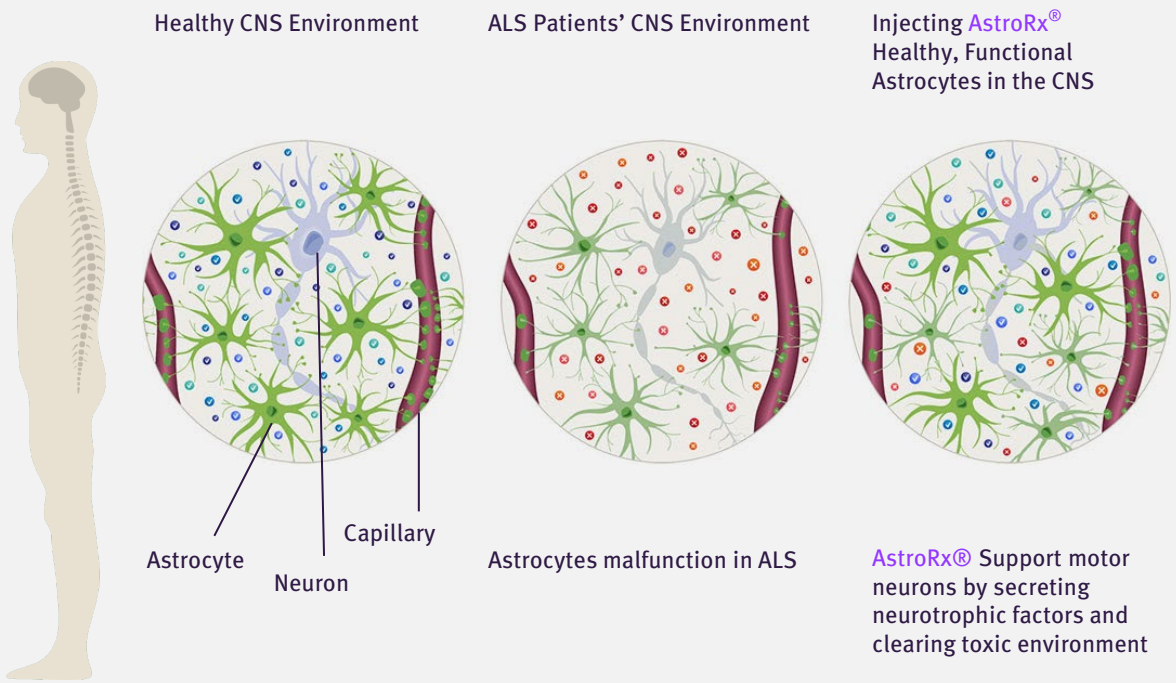
AstroRx® has Orphan drug designation from the U.S. Food and Drug Administration (“FDA”)

Why Use Astrocytes for ALS - AstroRx®

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In neurodegeneration, neurons die because their support cells (Astrocytes) fail
AstroRx® contains functional healthy astrocytes to protect ALS-diseased motor neurons using multiple mechanisms of action

In ALS, the patient's own astrocytes fail to support motor neuron survival		
Mechanism of Action	**ALS Patients' Astrocytes**	**AstroRx® Healthy, Functional Astrocytes**
Secrete neurotrophic factors [1]	☒	✓
Remove toxic factors (i.e. glutamate) [1]	☒	✓
Regulate oxidative stress [1]	☒	✓
Immune-modulation [2]	☒	✓



1. Izrael et al, 2020 Front Neurosci. 2020; 14: 824. doi: 10.3389/fnins.2020.00824
2. Izrael et al, 2021 Front Med (Lausanne) 2021; 8: 740071. doi: 10.3389/fmed.2021.740071

AstroRx® Phase 1/2a FIH clinical trial

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3-month Follow-up Results

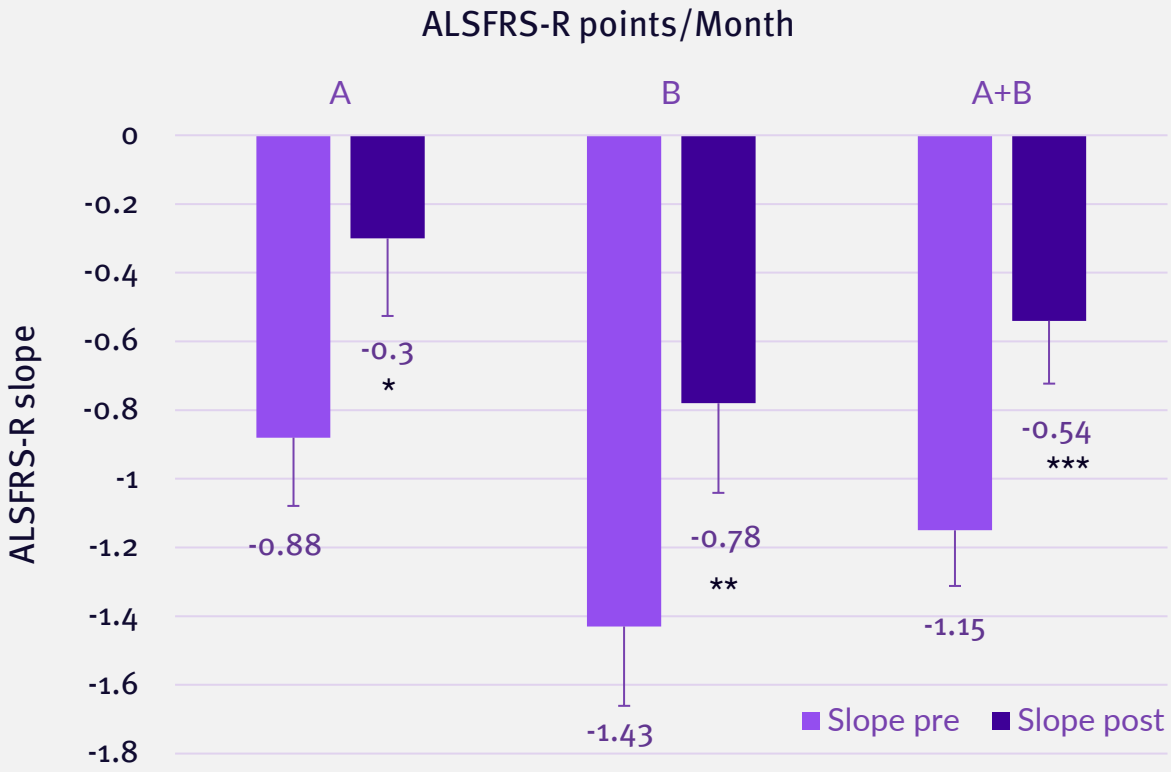
Demonstrated a Clinically Meaningful Decline in Disease Progression

Clinical results are consistent between Cohorts A and B

ALSFRS-R slope difference between 3 months pre- and post-treatment in Cohorts A and B

GMP manufacturing to human dosing achieved
Favorable safety profile in ALS

Clinically meaningful signal in rapid progressors



* p=0.0396, **p=0.0023, *** p=0.0004 (MMRM analysis)

ALSFRS-R is a Clinically Accepted Measure of Disease State

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DOXA (Dual Orexin-Receptor Agonist) Platform

Strategic Enhancements

Positioned for potential out-licensing or strategic partnerships

Target indications:

- Targeting sleep–wake regulation
- Rare Sleep Disorders (Narcolepsy, Idiopathic Hypersomnia)
- Neurodegenerative / neuroinflammation diseases
- Diabetes-Associated Neurological Disorders (DANS)





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Scalability & Clinical Manufacturing Capabilities

From Art to Industry

Long-term success in cell therapy through reproducible expansion and differentiation technology, manufacturing systems that are scalable, and cost-efficient

Manufacturing Strategy

Allogeneic, Off-the-Shelf Model Enables standardized production and broad patient access, proven ability for frozen product developed

Core Advantage

GMP Master Cell Banks
Freezing technology- easily shipped worldwide
Scale up manufacturing capabilities
Agreement with well-established CDMO for clinical manufacturing

NewcelX Pipeline Focus – Type 1 Diabetes & CNS Disorders

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Program	Indication	Discovery	Preclinical	IND
Priority Program				
NCEL-101	Type 1 Diabetes			
Adjacent Programs				
ITOL-102	**Type 1 Diabetes**			
NCEL-201				
NCEL-301				
NCEL-007				
AstroRx® (Platform Validation)	**ALS** (Amyotrophic Lateral Sclerosis)			
	Neurodegenerative Diseases (MS, PD)			
DOXA Platform	**Narcolepsy,** Sleep Disorders (PoC),			
	Neurodegenerative Diseases (PD)			

Patent Protection

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Patents in major countries/markets such as the US, EU and other countries providing NewCelX with robust technology protection

✓ Methods for differentiating and purifying pancreatic endocrine cells	Granted [1]
✓ Insulin producing cells derived from pluripotent stem cells	Granted
✓ Methods of generating glial and neuronal cells and use of same for the treatment of medical conditions of the CNS	Granted
✓ Methods of generating glial and neuronal cells	Granted
✓ Directed differentiation of astrocytes from human pluripotent stem cells for use in drug screening and the treatment of amyotrophic lateral sclerosis (ALS)	Granted [2]
Dihydro-quinazoline, -benzothiazine and -benzoxazine derivatives and use thereof as orexin receptors agonists for treating or preventing neurological diseases (Chemical matter / synthesis)	PCT Phase
Dihydro-quinazoline, -benzothiazine and -benzoxazine derivatives and use thereof as orexin receptors agonists for treating or preventing neurological diseases (Therapeutic use / indications)	PCT Phase

1. Excluding certain patents in the U.S. and Brazil.
2. Excluding certain patents in the U.S., China, and Canada.



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Corporate

The Partnership "Blueprints" Model:

We aim to monetize the platform in three ways:

1. Program Licensing: Regional deals for NCEL-101/AstroRx®
2. Platform Partnerships: Licensing the "Manufacturing Blueprints" to partners (e.g., Pharma wants Dopamine neurons; we build them)
3. Delivery Partnerships: Device co-development

Leadership Team

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Ronen Twito
Executive Chairman & Chief Executive Officer



Prof. Michel Revel MD, PhD
Director & Chief Scientific Officer



Omri Hagai, CPA
Chief Financial Officer



Kfir Molakandov, PhD
Vice President of Research & Development



Prof. Ariel Revel, MD
Medical Director



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