Corporate Presentation

Capricor Therapeutics, Inc.
Nasdaq: CAPR
May 2026

Forward Looking Statements

Statements in this presentation regarding the efficacy, safety, and intended utilization of Capricor's product candidates; the initiation, conduct, size, timing and results of clinical trials; the pace of enrollment of clinical trials; plans regarding regulatory filings, future research and clinical trials; regulatory developments involving products, including future interactions with regulatory authorities and the ability to obtain regulatory approvals or otherwise bring products to market; manufacturing capabilities; dates for regulatory meetings; the potential that required regulatory inspections may be delayed or not be successful which would delay or prevent product approval, revenue and reimbursement estimates, projected terms of definitive agreements, our financial position, our possible uses of existing cash and investment resources, and statements regarding our litigation with Nippon Shinyaku Co., Ltd. and NS Pharma, Inc., including the nature of the dispute, our expectations regarding any legal proceedings, and our ability to commercialize Deramiocel independent of our existing distribution agreement and any other statements about Capricor's management team's future expectations, beliefs, goals, plans or prospects constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements that are not statements of historical fact (including statements containing the words "believes," "plans," "could," "anticipates," "expects," "estimates," "should," "target," "will," "would" and similar expressions) should also be considered to be forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from those indicated by such forward-looking statements. More information about these and other risks that may impact Capricor's business is set forth in Capricor's Annual Report on Form 10-K for the year ended December 31, 2025, as filed with the Securities and Exchange Commission on March 17, 2026 and in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2026, as filed with the Securities and Exchange Commission on May 13, 2026. All forward-looking statements in this presentation are based on information available to Capricor as of the date hereof, and Capricor assumes no obligation to update these forward-looking statements.

Deramiocel and the StealthX™ vaccine are investigational candidates and have not been approved for commercial use in any indication.

At Capricor, we are committed to advancing transformative treatments and delivering meaningful outcomes for patients in need.

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Capricor's History & Evolution

From Discovery to Late-Stage Clinical Validation and Platform Expansion

2004: **Discovery** of **Cardiosphere-derived cells** (CDCs) at **Johns Hopkins University**

2005: Capricor was founded and **embarked** on a journey to **elucidate** the **mechanism** of **cell-based** biology for **therapeutic development**

2012: Initial **publication demonstrating** early **clinical benefits** of CDCs[1]

2014: **Uplisted** to **NASDAQ** Capital Market **(CAPR)**

2015: **Discovery** of **exosomes** as the primary **mode** of action of CDCs

2018: **Published** foundational preclinical **Duchenne muscular dystrophy (DMD)** study in ***Stem Cell Reports***

2019: **Published positive clinical** results from HOPE-Duchenne **Phase 1 study** in ***Journal of Neurology***[2]

2021: **Relocated** Capricor's **HQ** to **San Diego, California**

2022: **Published positive Phase 2** HOPE-2 **results** in ***The Lancet***

Platform expansion Leveraging **exosome-biology** beyond DMD into **new indications**

2025: **Initiated** Phase 1 **StealthX™** exosome-based vaccine study in collaboration with the **NIH**

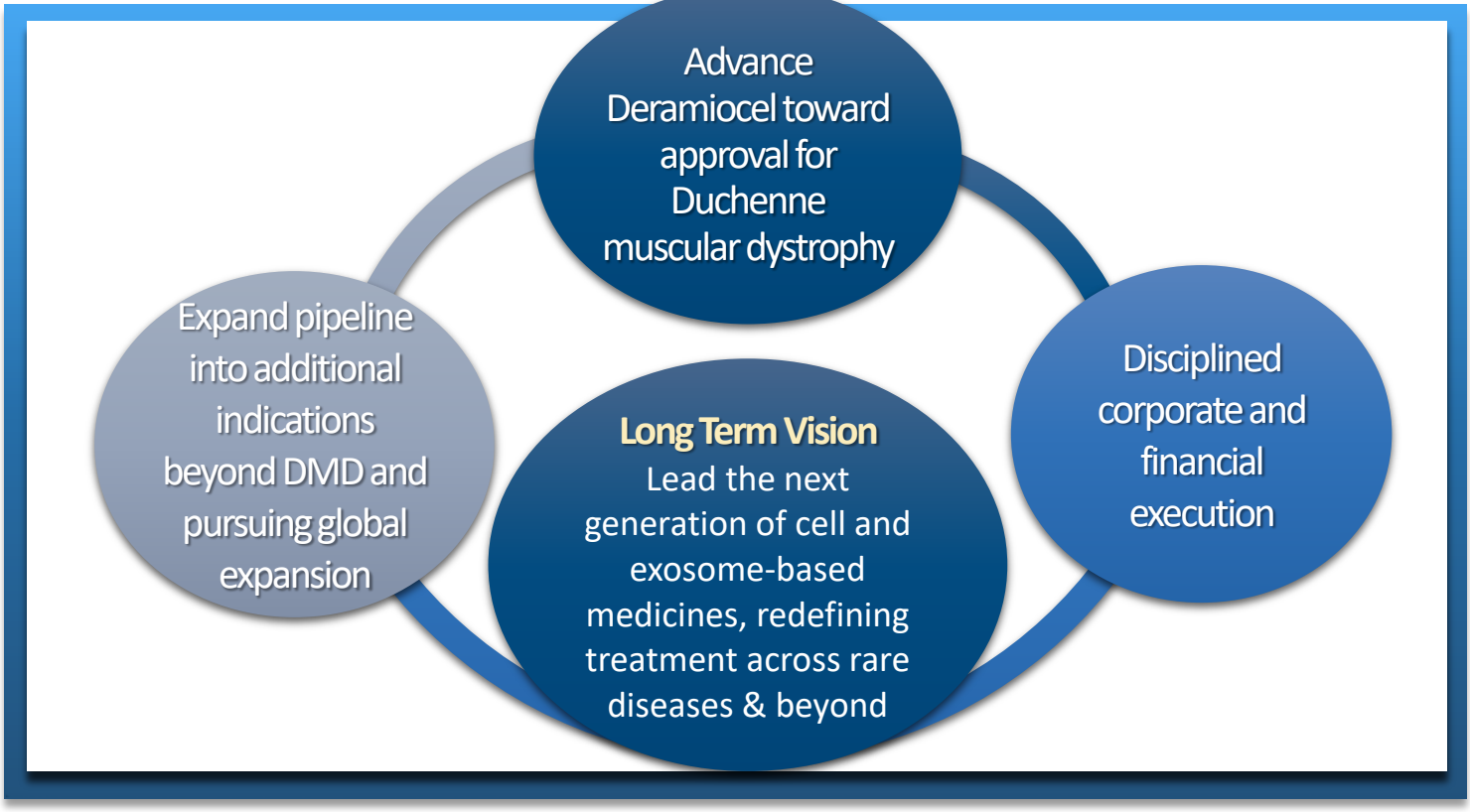
Q4 2025: Announced **positive topline** results from HOPE-3 **Phase 3** study in **DMD**

Present: **BLA accepted** for review: **PDUFA action Aug. 22, 2026**

[1]Makkar, et al. *The Lancet*. 2012

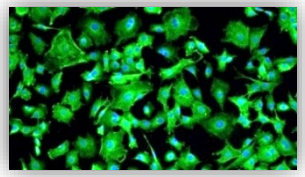
[2]Study funded with the support from the California Institute for Regenerative Medicine (CIRM)

Capricor's Strategic Priorities



Groundbreaking Science

Developing First-in-Class Therapeutics



Scientific Foundation
Cardiology and Cell Biology

- **Initial technology:** developed at Johns Hopkins University
- **Lead product:** cellular therapy comprised of cardiosphere-derived cells (CDCs); endogenous human heart stromal cell population
- **Extensive IP portfolio:** ~150 patents & patent applications

Lead Program in Rare Disease
Duchenne Muscular Dystrophy

- **Lead indication**: DMD: rare, genetic disease afflicting 15,000 boys and young men in U.S.[1]
- **Positive safety and efficacy** results demonstrated across Phase 1, 2 and 3
- **In-house GMP manufacturing**
- **BLA:** currently under U.S. FDA review
- **PDUFA action date:** Aug. 22, 2026

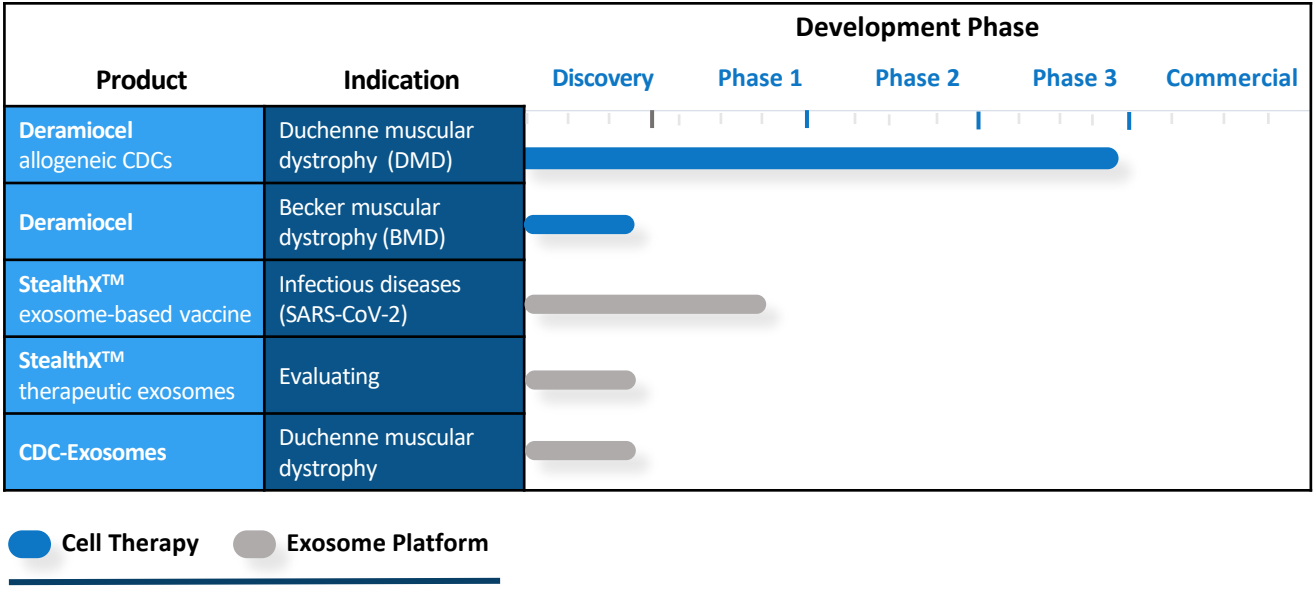
Pipeline Development
StealthX™ Exosome Platform

- **Targeted** natural drug delivery platform
- **Phase 1 study conducted** in collaboration with NIH with exosome-based vaccine
- **Aim to secure partnerships** for platform advancement

[1]DMD estimated prevalence

Capricor's Product Pipeline

Advancing Transformative Therapies for Rare Diseases & Beyond



Deramiocel Duchenne Program

PDUFA Target Action Date: August 22, 2026

- **HOPE-3 Phase 3 trial** (n=106; randomized, double-blind, placebo-controlled) met its primary endpoint (PUL v2.0; p=0.03), key cardiac secondary endpoint (LVEF; p=0.04), and all Type I error-controlled secondary endpoints
- **Deramiocel BLA under active FDA review**; labeling discussions expected to commence soon
- If approved, Deramiocel would serve to be mutation agnostic, with the potential to address a broad DMD patient population
- **GMP manufacturing facility operational**; second-floor expansion underway
- **Building commercial capabilities to support a potential U.S. launch**

Capricor: Financial Overview

Runway and Potential Cash Infusions

Cash balance	**$279 million**[1]	**Employees: ~300 FTEs**
Current runway	**Through 2027*** *Excludes any potential revenue from product sales and the potential monetization of a PRV	
Outstanding shares	**57.9 million**[1]	
Eligible for priority review voucher (PRV)	**Potential sale of PRV, if received** ~$150-200 million[2]	

[1]Based on Q1 10Q financials
[2]Estimate based on recent public sale of PRV = ~$200M

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Deramiocel: Cellular Therapy

Comprised of Human Allogeneic Cardiosphere-Derived Cells (CDCs)

CDCs are derived from cells of transplant qualified human hearts; they are not stem cells

>250

Peer-reviewed scientific publications worldwide[1]

>250

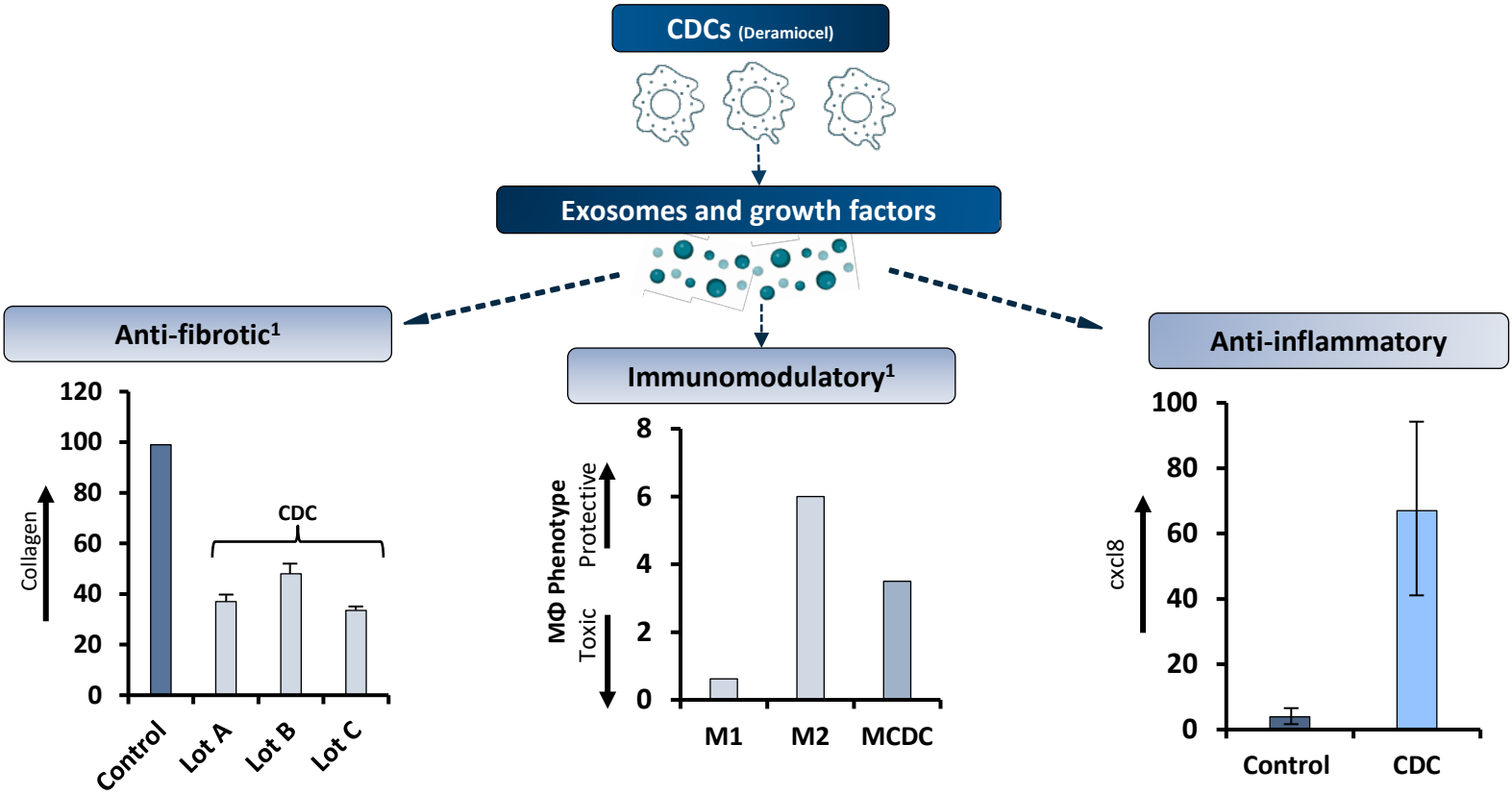
Patients administered CDCs across multiple clinical trials

>800

Doses of intravenous Deramiocel administered to patients with DMD

[1]Based on PubMed search

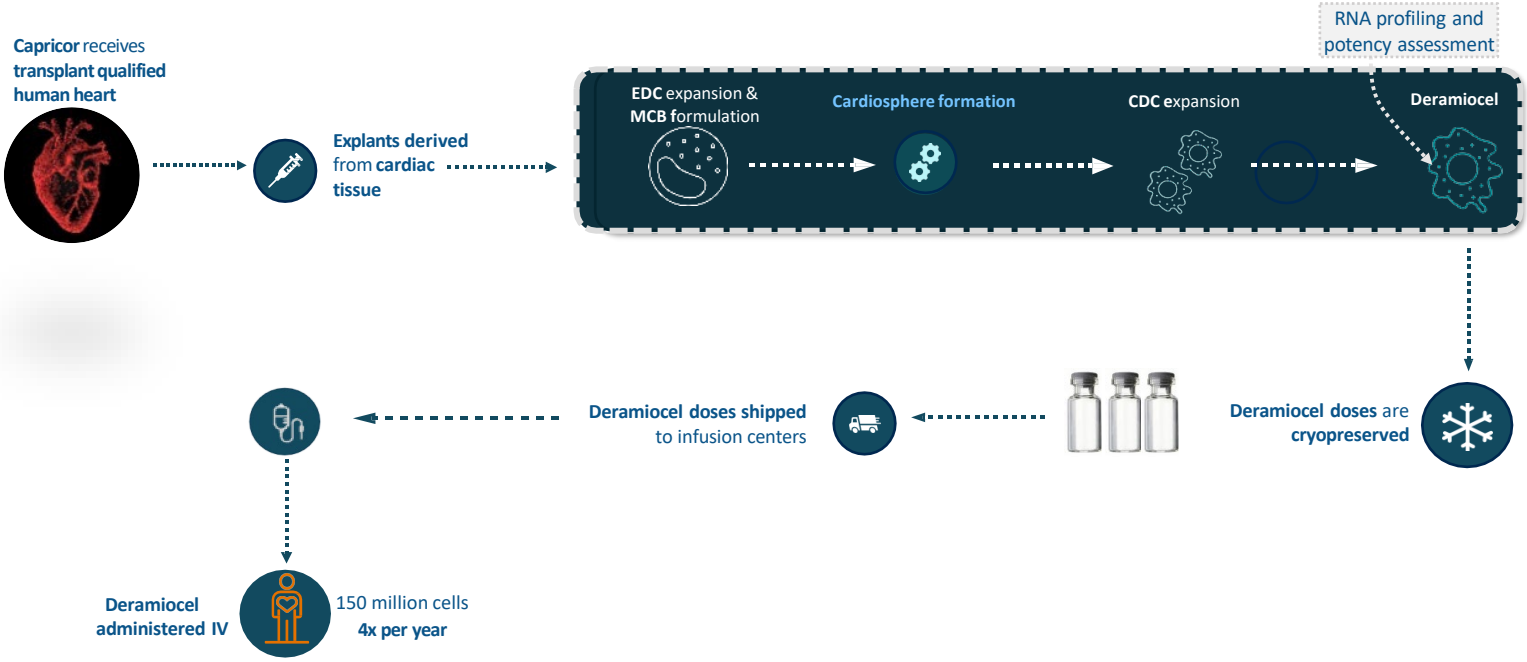
Deramiocel's Multi-Modal Mechanism



[1]de Couto et al., 2015

Deramiocel Manufacturing

Novel Process Enables a Multi-Dose Allogeneic Product



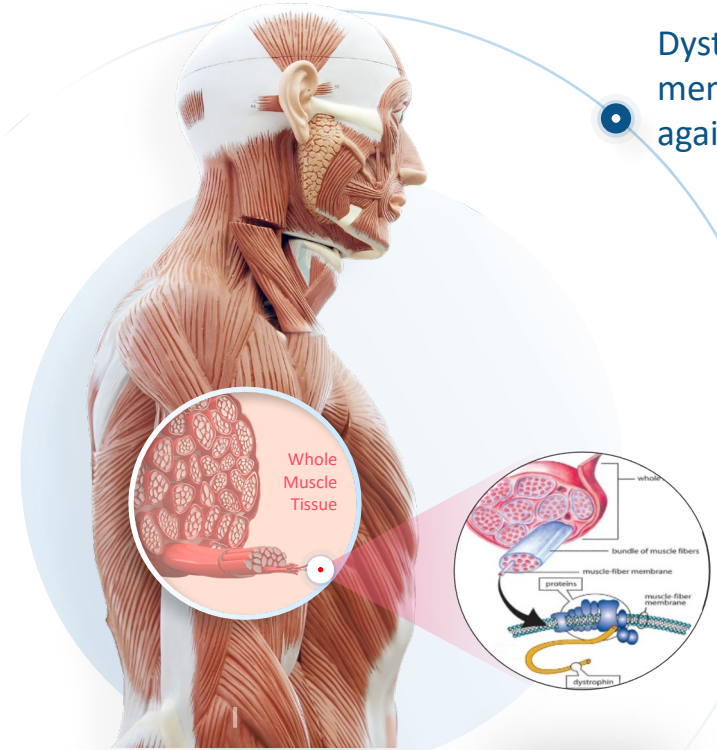
Capricor's GMP Manufacturing Facility

San Diego, California

FDA Pre-License Inspection (PLI) successfully completed in 2025

DMD: A Devastating Rare Disease

High Unmet Needs Across the Entire Disease Trajectory



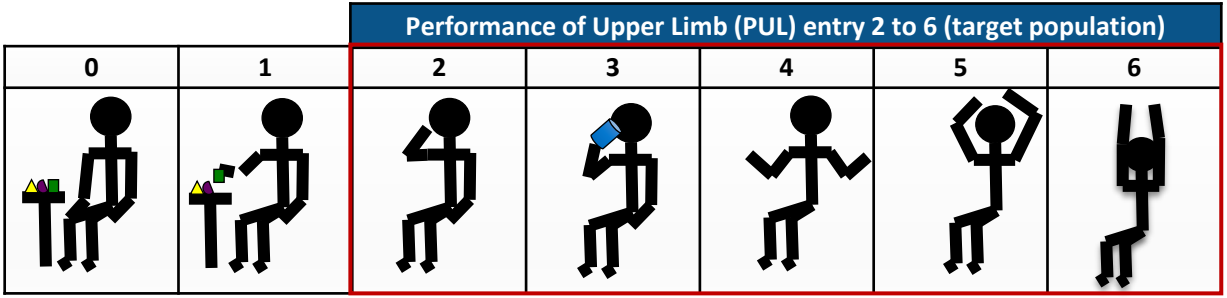
Dystrophin is a key structural protein at the muscle cell membrane that maintains muscle integrity and protects against damage; acts both as a cushion and glue

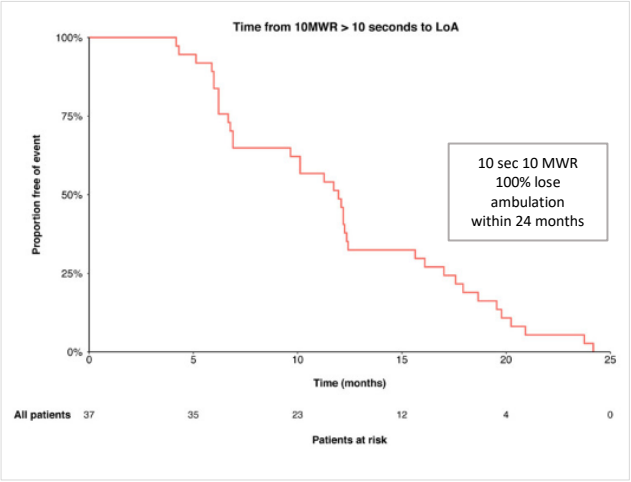
Much of the muscle injury that occurs in DMD is attributable to **secondary damage caused by inflammation**

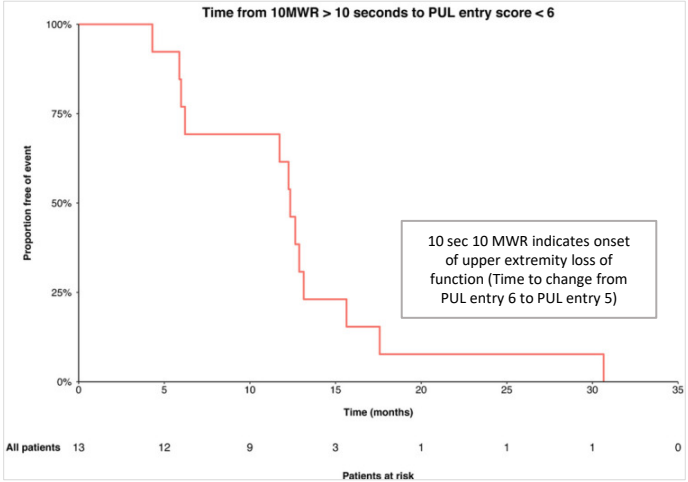
Without dystrophin, muscles (**cardiac and skeletal**) are unable to function properly, suffer progressive damage and eventually die

Approaching Loss of Ambulation

Late-Ambulatory Patients with DMD



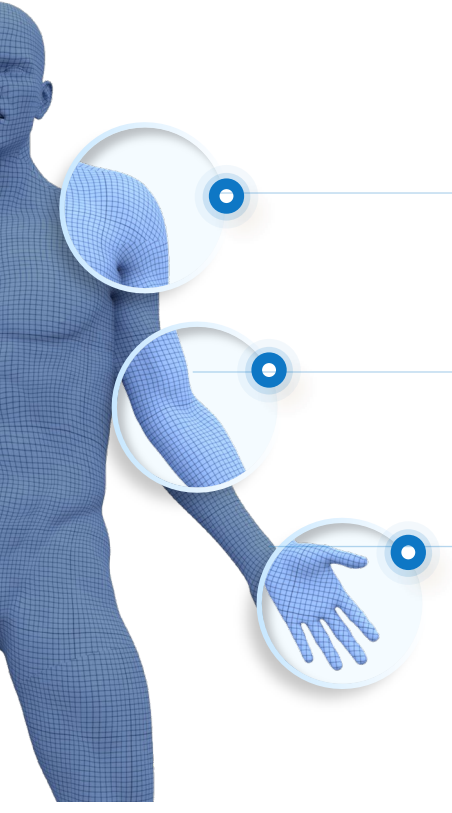




McDonald CM, Signorovitch J, Mercuri E, et al. PLoS One

Performance of Upper Limb (PUL)

Validated Tool to Assess Skeletal Muscle Function



Shoulder Level
4 items

- Lifting upper extremity weights
  - Shoulder height
  - Above shoulder height

Middle Level
9 items

- Hand to mouth w/w/o weights
- Hand to table
- Stack light and heavy cans
- Moving weights on table
- Remove container lid
- Lift light and heavy cans
- Tearing paper

Distal Level
8 items

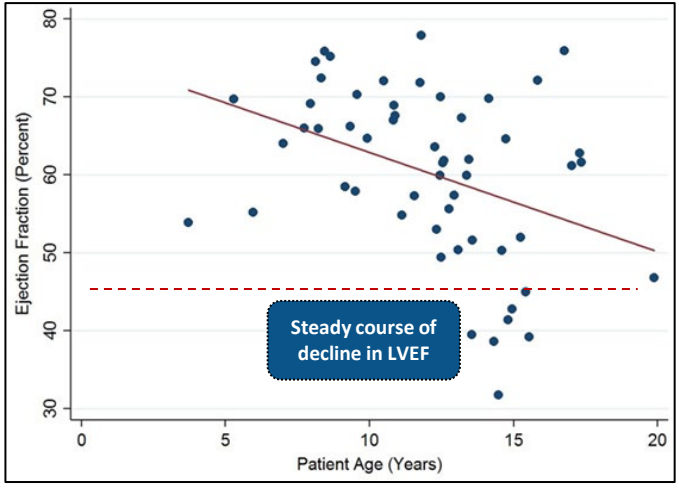
- Tracing a path
- Supination
- 3-point grip
- Push on a light
- Pick up coins
- Finger pinch
- Place fingers on diaphragm
- Thumb (key) grip

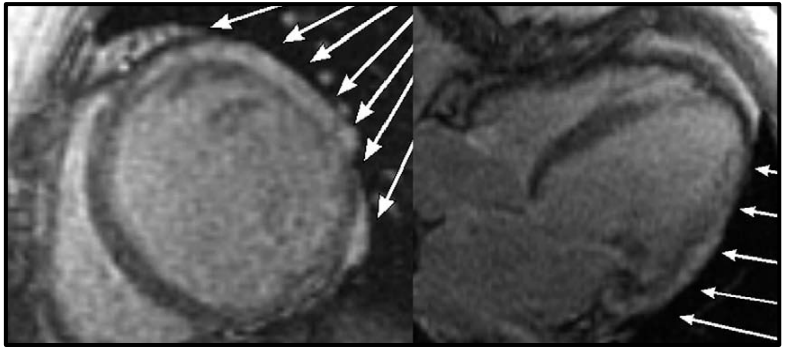
*Mayhew et al, 2019; Pane et al, 2018.

Duchenne Cardiomyopathy

"Cardiopulmonary failure is the leading cause of mortality in DMD in the current era…Unfortunately, standard heart failure therapies are not DMD-specific and have limited efficacy….For maximal efficacy, most therapies should begin early in the disease process…"

Circulation: Heart Failure, (2023) , Soslow J.H., M.D., et al.





Cardiac MRI in DMD patient

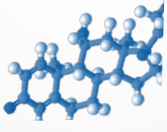
Delayed enhancement indicative of myocardial fibrosis

Frontiers | Echocardiographic Image Quality Deteriorates with Age in Children and Young Adults with Duchenne Muscular Dystrophy (frontiersin.org)

Deramiocel has the Potential to Redefine the Standard of Care for Duchenne

Deramiocel can be used in combination with existing therapeutics

GENE THERAPIES



EXON SKIPPING THERAPIES

Deramiocel

First-in-class potential therapy for Duchenne muscular dystrophy
CARDIAC AND SKELETAL MUSCLE

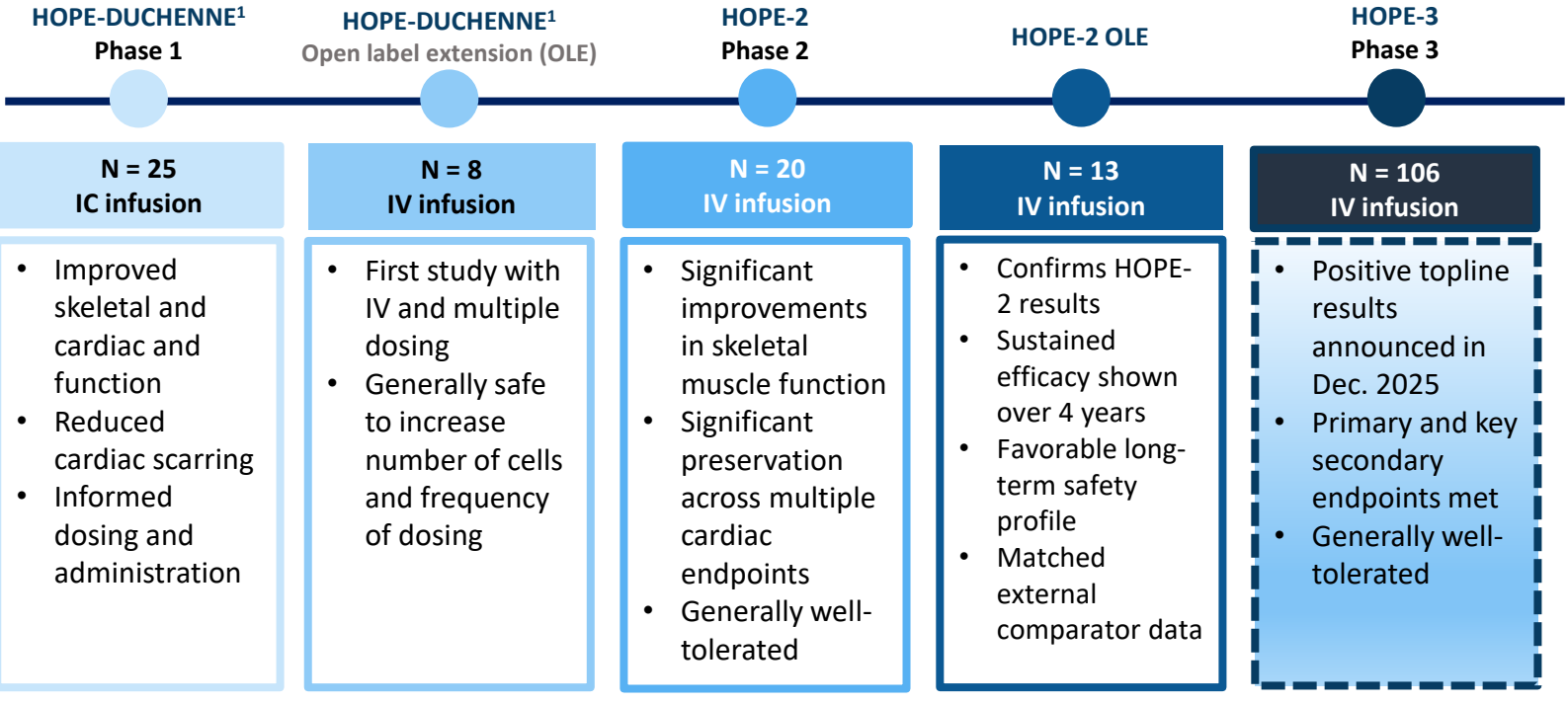
- **Orphan Drug Designation** (FDA and EMA)
- **Regenerative Medicine Advanced Therapy Designation** (FDA)
- **Rare Pediatric Disease Designation** (FDA)
- **Advanced Therapy Medicinal Product Designation** (EMA)

CORTICOSTEROIDS

STANDARD CARDIAC MEDICATIONS

Deramiocel's Clinical Development

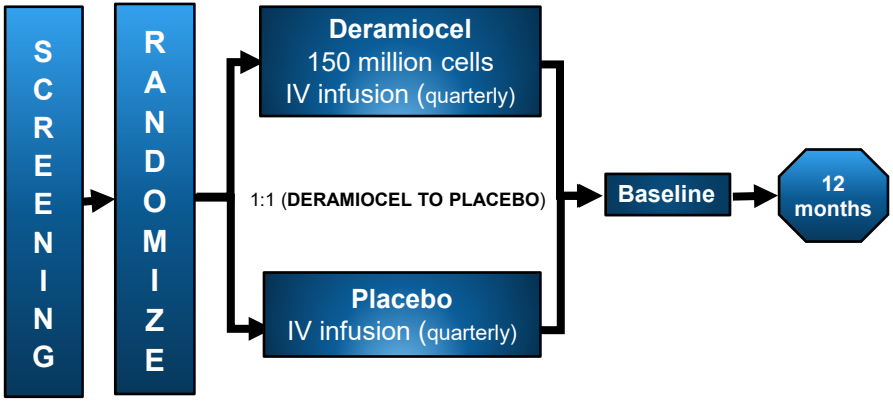
A Decade of Development in Duchenne



[1]Study funded with the support from the California Institute for Regenerative Medicine (CIRM)

HOPE-3 Pivotal Phase 3 Trial

Overview



Design & Endpoints

- Phase 3: randomized (1:1), double-blind, placebo-controlled study
- **N = 106 subjects randomized**
- Conducted in the United States: 20 clinical sites
- **Primary efficacy endpoint**[1]: PUL v2.0 *skeletal muscle assessment*
- **Key secondary endpoint**[1]: left ventricular fraction (LVEF) *cardiac assessment*
- **Other secondary endpoints**[1]: mid-level PUL v.2.0, GST and LGE
- **Announced positive topline results**: **Dec. 2025**

ClinicalTrials.gov ID: NCT05126758
[1]Type-I error controlled

HOPE-3: Study Demographics

Baseline Demographics	Placebo (n=52)	Deramiocel (n=54)	Overall (n=106)[1]
Age (years)			
N	52	54	106
Mean (SD)	14.6 (2.95)	15.4 (3.10)	15.0 (3.04)
Median	14	15	15
Min, Max	10, 22	10, 22	10, 22
PUL v2.0 entry item score			
2,3	23 (44.2)	25 (46.3)	48 (45.3)
4,5,6	29 (55.8)	29 (53.7)	58 (54.7)
Diagnosed cardiomyopathy[2]			
No	14 (26.9)	13 (24.1)	27 (25.5)
Yes	38 (73.1)	41 (75.9)	79 (74.5)
Baseline LVEF%			
n	46	45	91
Mean (SD)	59.303 (6.108)	55.345 (7.743)	57.346 (7.206)
Median	59.309	55.892	57.532
Min, Max	47.395, 73.981	36.537, 71.112	36.537, 73.981
Ambulatory status			
Non-ambulatory	44 (84.6)	46 (85.2)	90 (84.9)
Ambulatory	8 (15.4)	8 (14.8)	16 (15.1)

[1]One subject enrolled but dropped out prior to baseline assessment (n=105)
[2]Updated as of Feb. 2026; subgroup: 64 of 79 patients with centrally reviewed and evaluable cardiac MRI LVEF assessments at baseline and 12 months

HOPE-3: Safety Profile Results

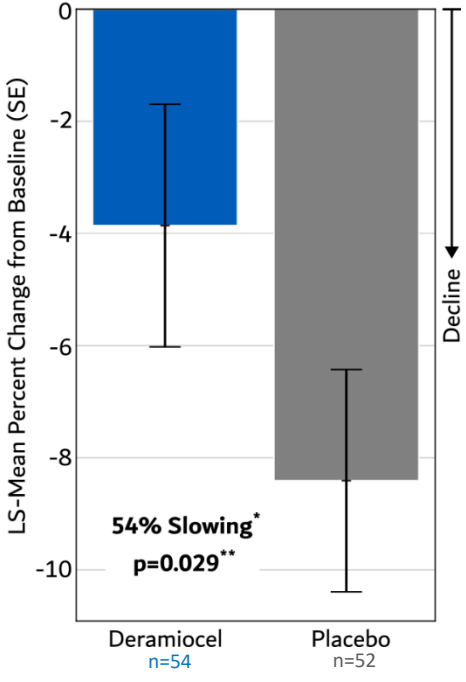
Overview	Placebo (n=52), n (%)	Deramiocel (n=53), n (%)	Overall (n=105[1]), n (%)
Any TEAEs	43 (82.7)	50 (94.3)	93 (88.6)
TEAEs related to IP or administration procedure	19 (36.5)	44 (83.0)	63 (60.0)
TEAEs related to IP	16 (30.8)	44 (83.0)	60 (57.1)
TEAEs related to administration procedure	9 (17.3)	23 (43.4)	32 (30.5)
TEAEs related to IP or administration procedure by maximum severity			
Mild (grade 1)	15 (28.8)	19 (35.8)	34 (32.4)
Moderate (grade 2)	3 (5.8)	25 (47.2)	28 (26.7)
Severe (grade 3)	0	0	0
Life-threatening (grade 4)	1 (1.9)	0	1 (1.0)
Fatal (grade 5)	0	0	0
TEAEs leading to death	0	0	0
Any serious TEAEs	5 (9.6)	1 (1.9)	6 (5.7)
Serious TEAEs related to IP or administration procedure	1 (1.9)	1 (1.9)	2 (1.9)

[1] Safety population (n=105)

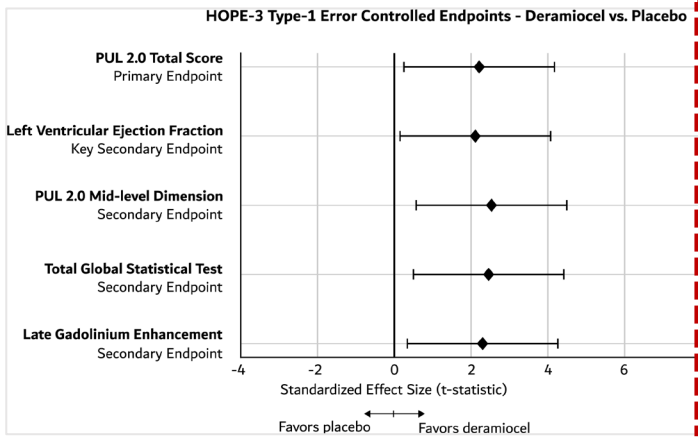
HOPE-3: Topline Efficacy Results

Primary Endpoint Met with Statistical Significance Achieved in **All** Type-1 Error Controlled Secondary Endpoints

PUL 2.0 Total Score - Month 12
Primary Endpoint



*LS-Mean difference = 4.55 percentage point (1.2 -point difference on the PUL scale)
** Based on prespecified repeated measures model using percent change from baseline

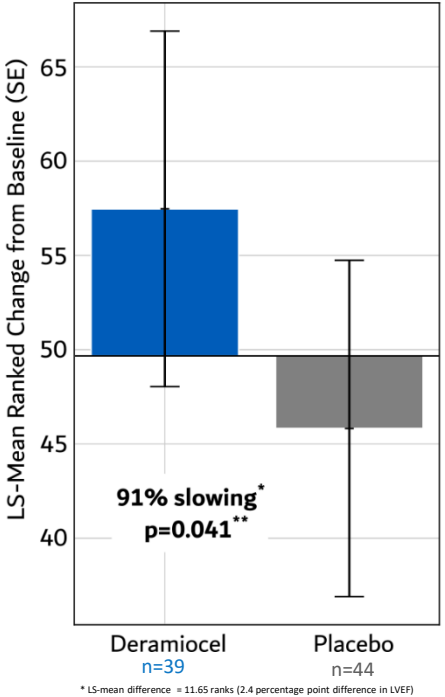


n	Treatment Difference	p-value
106	1.2 pts	0.029
83	2.4 % pts	0.041
106	1.0 pts	0.008
103	2.5 (t-statistic)	0.017
22	-3.0 segments	0.022

HOPE-3: Topline Cardiac Efficacy Results

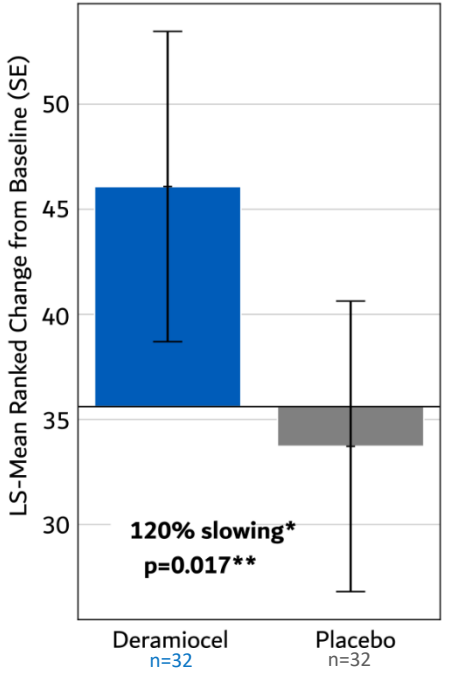
Left Ventricular Ejection Fraction

Left Ventricular Ejection Fraction - Month 12
Key Secondary - ITT Population



* LS-mean difference = 11.65 ranks (2.4 percentage point difference in LVEF)
** Based on prespecified rank ANCOVA model
LVEF: n reflects the number of patients in the ITT population with centrally reviewed and evaluable cardiac MRI LVEF assessments at baseline and 12 months (n=83)

Left Ventricular Ejection Fraction - Month 12
Secondary Endpoint - Cardiomyopathy Population



* LS-mean difference = 12.36 ranks (3.3 percentage point difference in LVEF)
** Based on prespecified rank ANCOVA model
LVEF: n reflects the number of patients in the subgroup population with centrally reviewed and evaluable cardiac MRI LVEF assessments at baseline and 12 months (n=64)

DMD: Large Commercial Opportunity

Deramiocel

Potential to be first-in-class cellular therapy for DMD patients

Prevalence[1]	**15,000** DMD patients in **United States**	**200,000** DMD patients **worldwide**
Life Expectancy	**~25-30 years**	
Disease Burden	**High unmet clinical need** Patients experience **high symptom burden** including muscle weakness, **loss of ambulation**, loss of independence to transfer, feed or turn, **respiratory** and **cardiomyopathy**	
Market Size[2]	**~$27 Billion** **Global market** size estimated by **2030**	
Commercial Opportunity	**Target reimbursement price** Aim to be similar or **higher** than approved **exon skipping** therapies	

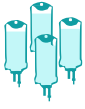
[1]DMD estimated prevalence

[2]Data estimate from Research and Markets Report

Deramiocel: Strong Commercial Profile

Strong Clinical Profile

First-in-Class Therapy for DMD



Deramiocel has **immunomodulatory**, **anti-fibrotic** and **anti-inflammatory** properties

Slows Disease Progression

Data shows **slowing of** DMD **skeletal and cardiac** disease **progression** in **multiple** clinical trials

Sustained Benefit

Long-term data continue to support **safety and** potential **disease attenuation**

Safety Profile

Over **800 IV infusions** of Deramiocel with **favorable safety profile**

Significant Potential Commercial Reach

Commercial Infrastructure

Capricor is **building in-house commercial capabilities** to **support** the potential commercialization of **Deramiocel** in the **U.S.**

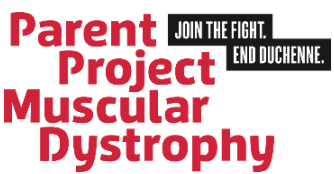
Patient Support

Patient support leveraging **Capricor's deep understanding** of **patients** and **physicians**

Large Reimbursement Potential

Pricing estimates **similar to approved** exon skipping drugs

Key Duchenne Advocacy Relationships



World-Class Duchenne Advisory Board

Jonathan Soslow, M.D. MSCI
Vanderbilt University Medical Center (USA)

Chet Villa, M.D.
Cincinnati Children's Hospital Medical Center (USA)

Timothy Franson, M.D., FACP, FIDSA
Faegre Drinker Biddle & Reath LLP (USA)

Michelle Eagle, Ph.D., M.Sc., MCSP
Atom International Ltd. (UK)

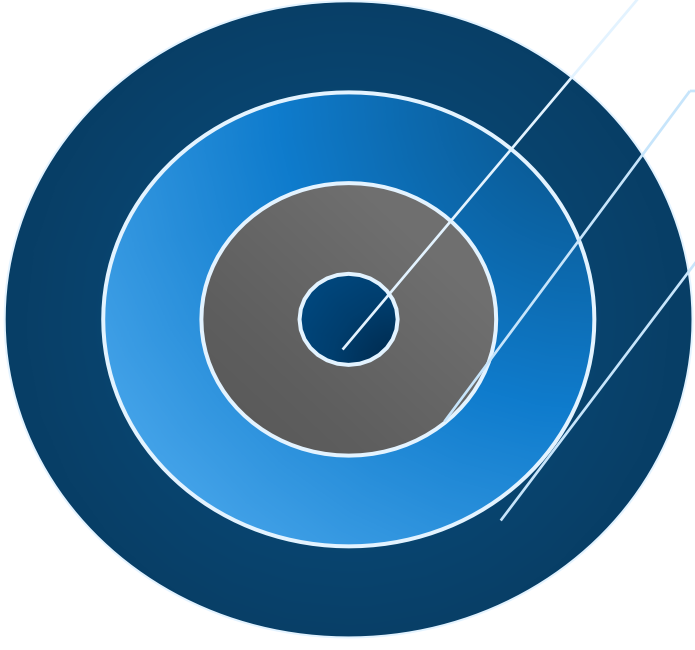
Eugenio Mercuri, M.D., Ph.D.
Catholic University of the Sacred Heart (Italy)

Kan Hor, M.D.
Nationwide Children's Hospital (USA)

Pat Furlong
Parent Project Muscular Dystrophy, PPMD (USA)

Michael Taylor, M.D., Ph.D.
Texas Children's Hospital (USA)

Potential Indication Expansion of Deramiocel



DUCHENNE MUSCULAR DYSTROPHY

BECKER MUSCULAR DYSTROPHY

Becker cardiomyopathy has similar progression to DMD-cardiomyopathy

OTHER POTENTIAL DISEASES STATES

-Cardiomyopathies
-Dystrophinopathies
-Muscular dystrophies

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Exosomes are Nature's Delivery Tool

Natural Drug Delivery Platform

- ~100 nanometer vesicles
- Made by nearly all cells
- Abundant in blood and biofluids
- Transfers signals and molecules to other cells
- Decades of transfusion and transplantation medicine indicates safety
- Can be used to deliver RNAs, DNA, proteins and small molecules

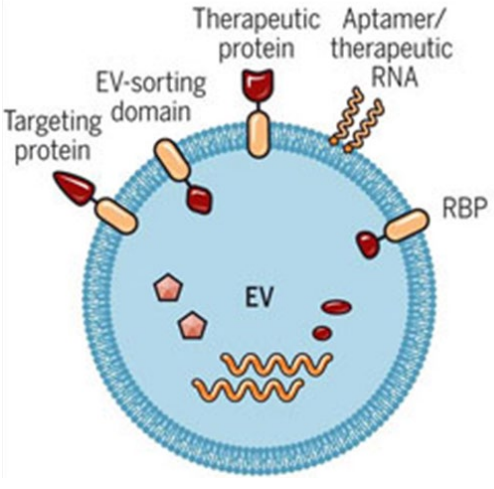
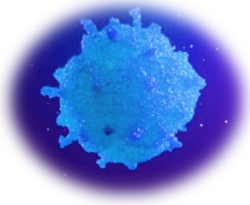
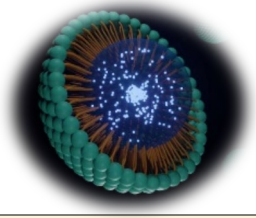


Image adapted from Wiklander, 2019
Extracellular vesicles (EV) - term for cell-derived vesicles, including exosomes

Potential Benefits: Exosomes vs. LNPs





	Natural Exosomes	*Synthetic LNPs*
Commercial manufacturing	+	+++
Therapeutic loading	++	++
Therapeutic release	+++	+
Cellular uptake	+++	+
Targeting	+++	+
Low immunogenicity	+++	+
Safety (expected)	(+++)	+
Clinical trials	+	+++

StealthX™ Exosome Platform

StealthX™ technology allows Capricor to present diversified proteins *outside* of exosomes

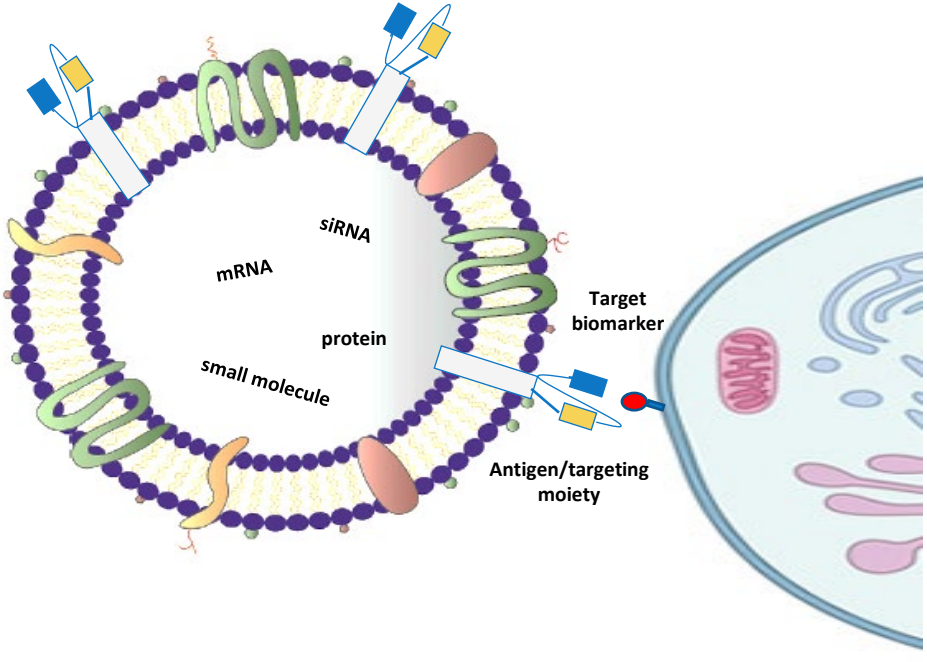
- ✓ Soluble proteins (ex. ScFvs)
- ✓ Transmembrane proteins (ex. Receptors)
- ✓ Viral antigens

StealthX™ technology allows Capricor to load diversified payloads *inside* of exosomes

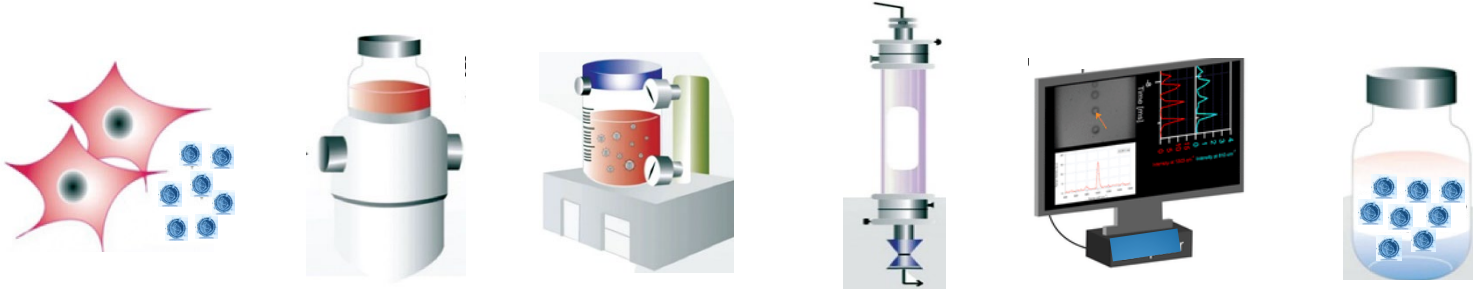
- ✓ RNA (siRNA, etc.)
- ✓ ASOs
- ✓ Proteins
- ✓ Peptides
- ✓ Small molecules

Potential cell and tissue specific targets with targeting moieties

- ✓ Muscle
- ✓ Brain
- ✓ Lung



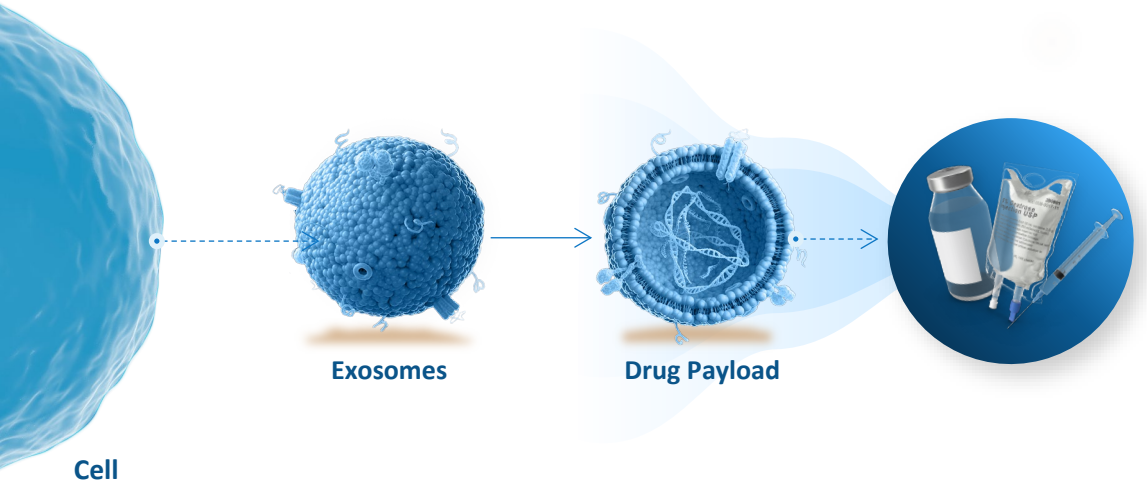
Exosomes: Scalable Production



- **Capricor has developed a scalable, reproducible process for exosome purification**
  - Producer cell line is widely used for production in other applications
  - Exosome purification process developed using scalable processes
- **Capricor's exosomes have been extensively characterized using qualified assays**
  - Exosome assays developed and qualified with guidance from FDA
  - Exosome yield, size, surface expression, payload content, loading and potency

StealthX™ Exosome Platform

Building a New Potential Class of Medicines



- **Monogenic Diseases**
  RNA, protein and small molecule therapeutics
- **Infectious Diseases**
  Vaccines
- **Oncology**
  Vaccines and targeted delivery therapeutics

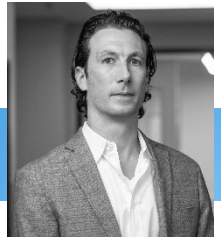
Goals

- Scale and partner
- Drive research through collaborations
- Expand and exploit platform and IP through partnerships

Experienced Leadership Team

Extensive Scientific and Operational Experience Across Pharma & Biotech

Linda Marbán, Ph.D.
Chief Executive Officer
Prior experience: Excigen, Johns Hopkins University



AJ Bergmann, M.B.A
Chief Financial Officer
Prior experience: Gettleson, Witzer & O'Connor

Kristi Elliott, Ph.D.
Chief Operating & Science Officer
Prior experience: Exotech, Intrexon Corp

Michael Binks, M.D.
Chief Medical Officer
Prior experience: Pfizer, GlaxoSmithKline

Michael Maurer, M.B.A.
Chief Commercial Officer
Prior experience: Sarepta, Bristol Myers Squibb, Takeda

Mark Awadalla
Chief Development Officer
Prior experience: Celularity, Mustang Bio, Celgene

Karen Krasney, J.D.
Executive VP and General Counsel
Prior experience: Biosensors International

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