Cartesian therapeutics

# Pioneering mRNA Cell Therapy for Autoimmunity

November 2026



# Forward-looking statements

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**Forward-looking Statements**

Any statements in this presentation about the future expectations, plans and prospects of the Company, including without limitation, statements about the Company’s expected cash resources and cash runway, statements regarding the ability of the Company’s product candidates to be administered in an outpatient setting or without the need for preconditioning lymphodepleting chemotherapy, the availability and use of funds under the Company’s credit facility with K2 HealthVentures LLC, the potential of the Company’s product candidates to treat myasthenia gravis, juvenile myasthenia gravis, myositis, juvenile systemic lupus erythematosus, juvenile dermatomyositis, or any other disease, the anticipated timing or the outcome of ongoing and planned clinical trials, studies and data readouts, the anticipated timing or the outcome of the FDA’s review of the Company’s regulatory filings, including the number of trials that may be necessary in order to obtain marketing approval, the Company’s ability to conduct its clinical trials and preclinical studies, the timing or making of any regulatory filings, estimates regarding potential market sizes for the Company's product candidates, the anticipated timing or outcome of selection of developmental product candidates, the novelty of treatment paradigms that the Company is able to develop, the potential of any therapies developed by the Company to fulfill unmet medical needs, enrollment in the Company’s clinical trials, the partnership and strategic licensing agreement between the Company and WestGene and the ability of the Company and WestGene to develop therapies, treat disease, extend mRNA payloads into in vivo delivery, the integration and complementary nature of the Company's product candidates and WestGene’s lipid nanoparticle platform, the speed and efficiency of the development pathway for collaboration products between the Company and WestGene, the ability of the Company and its partnership with WestGene to generate clinical proof-of-concept data across multiple programs in several disease states, the ability of the Company and its partnership with WestGene to advance multiple internally developed next-generation anti-BCMA CAR constructs and a BCMA-directed T-cell engager (TCE) and the speed at which these constructs and TCE are developed, expectations regarding manufacturing and other statements containing the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “hypothesize,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would,” and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. 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# Executive summary



Cartesian's lead asset, Descartes-08, **delivers deep and durable responses in MG through 12 months** following a single course of therapy—administered outpatient without lymphodepletion—positioning it to transform the current treatment landscape.



The Phase 3 AURORA trial positions Descartes-08 to capture a **$1B+ market opportunity in MG***, with **Phase 3 data expected in 1Q27 and BLA filing in mid-2027**



**Phase 2 TRITON trial in myositis initiated**, positioning Descartes-08 to address **a multi-billion dollar market opportunity** due to the significant unmet need, with **data expected in 1H27**



**Data from the Phase 1/2 HELIOS trial** in pediatric autoimmune diseases, including JDM, **expected in 1H27**



Strategic licensing agreement with WestGene Biopharma to **accelerate the development of in vivo CAR-T platform in autoimmune diseases**



**US-based in-house manufacturing supports commercial readiness for MG launch** with potential biologic-like margins and full supply chain control – ongoing process optimization creates opportunity for further margin expansion.



**Cash runway into 2028**



MG, myasthenia gravis
JDM, juvenile dermatomyositis

CAR-T, chimeric antigen receptor T-cell therapy
*Internal company projections

# Late-stage clinical company pioneering mRNA cell therapy specifically designed to expand the reach of cell therapy to autoimmunity

- mRNA cell therapy designed to be dosed reliably and safely in an ***outpatient setting without lymphodepletion***
- Descartes-08: Investigational mRNA CAR T-cell (CAR-T) with ***deep and durable responses through 12 months*** observed in randomized, double-blind, placebo-controlled Phase 2b trial in patients with myasthenia gravis (MG)
- ***US-based in-house manufacturing*** supports commercial readiness with potential for biologic-like margins

## RECENT AND PLANNED ACTIVITY

### DESCARTES-08

- **Phase 3 AURORA trial data expected in 1Q27;** positions Descartes-08 to potentially access $1B+[1] market opportunity in MG
- **Phase 2 TRITON trial in myositis data expected in 1H27;** positions Descartes-08 to address a multi-billion dollar market opportunity due to significant unmet medical need[2]
- **Data from Phase 1/2 HELIOS pediatric trial** in children and young adults with autoimmune diseases, including JDM, **expected in 1H27**
- **In vivo clinical trial** through partnership with WestGene **continues to advance through preclinical development**

### CASH RESOURCES

- ***Strong balance sheet with approximately $125 million****
- Secured up to $150 million of non-dilutive financing from K2 HealthVentures; funding of $50 million from initial tranche received in May 2026
- Expected to support planned operations into 2028

*As of September 30, 2026; includes cash, cash equivalents and restricted cash; excludes cash not yet drawn from credit facility with K2 HealthVentures

1. Internal company projections
2. Kronzer et al., 2021; Coffey et al., 2021; Marotta et al., 2020; OCTAGAM efficacy data



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# Cartesian's mRNA approach is designed to expand the reach of potent cell therapy products to address autoimmunity



## No Lymphodepletion

No associated cytopenia, secondary malignancies, or other chemotherapy toxicities



## Administered Outpatient

Convenient dosing schedule



## Delivered at Therapeutic Levels

Administered at therapeutic doses without uncontrollable proliferation



## Transient Cell Modification

Does not carry risk of genomic integration

# Wholly-owned pipeline targets autoimmune disease

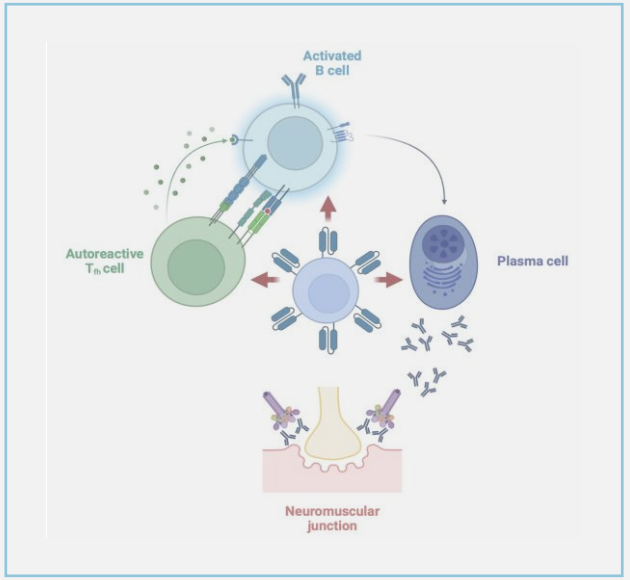
| Asset | Indications | Discovery/Preclinical | Phase 1 | Phase 2 | Phase 3 |
|---|---|---|---|---|---|
| **Descartes-08**<br>**Autologous mRNA CAR-T** | **Myasthenia Gravis** | | | | |
| | **Myositis**<br>(Dermatomyositis & Antisynthetase Syndrome) | | | | |
| | **Juvenile Dermatomyositis** | | | | |

# Descartes-08 is an mRNA CAR T-cell therapy in clinical development for autoimmune disease

**Engineered by transfection of autologous CD8+ T cells with mRNA encoding anti-BCMA CAR**

Typical lot **processed for infusion within as little as ~3 weeks**

Granted **U.S. FDA orphan and RMAT designations** for generalized myasthenia gravis, and **RPDD** for juvenile dermatomyositis






RMAT, Regenerative Medicine Advanced Therapy
RPDD, Rare Pediatric Disease Designation

FDA, U.S. Food and Drug Administration
BCMA, B-cell maturation antigen

# Descartes-08 in Myasthenia Gravis

# Myasthenia gravis is a rare, progressive autoimmune disease with significant unmet need

**106,000+**

**Patients in the U.S.[1]**

**Characterized by debilitating fatigue and muscle weakness**



Limbs | Respiratory | Ocular | Facial



**Current treatments require chronic or frequent administration and have limited durability**



## Significant Unmet Need Remains

- **Highly heterogenous disease biology** makes a standardized treatment approach ineffective[2]
- **Limited durability from current therapies** requires patients to rely on chronic immunosuppression and dosing[3]
- **Suboptimal depth and durability of response** leaves white space for long-lasting remission[3]
- Achievement of **minimal symptom expression over time remains a key treatment goal** for physicians[4]


1. Rodrigues et al. 2023
2. DOI: 10.1080/1744666X.2021.1936500
3. VYVGART label
4. Company neurologist ad-board



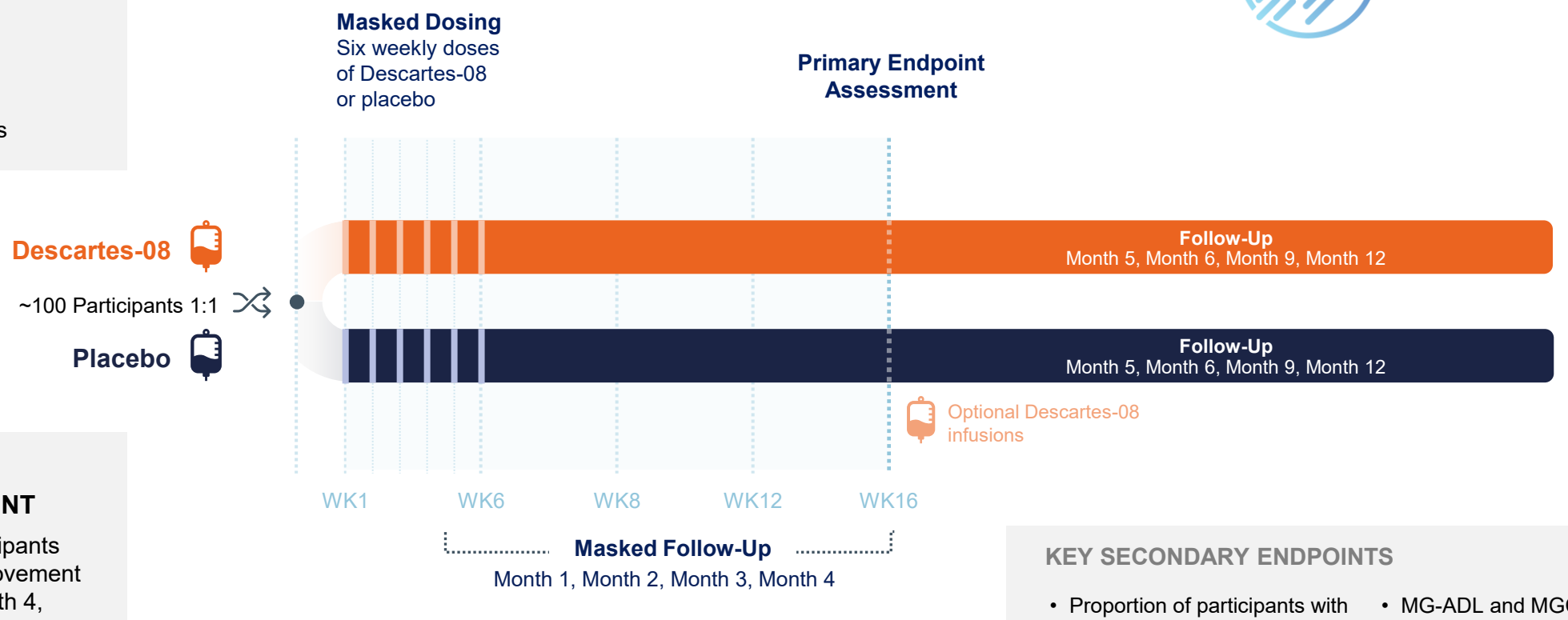

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# AURORA: Randomized double-blind, placebo-controlled Phase 3 trial of Descartes-08 in AChR Ab+ gMG with data expected in 1Q27

aurora TRIAL

## INCLUSION CRITERIA

- AChR Ab+
- MGFA Class II-IV
- MG-ADL ≥6
- On stable doses of immunosuppressants




## PRIMARY ENDPOINT

- Proportion of participants with MG-ADL improvement of ≥3 points at Month 4, relative to placebo

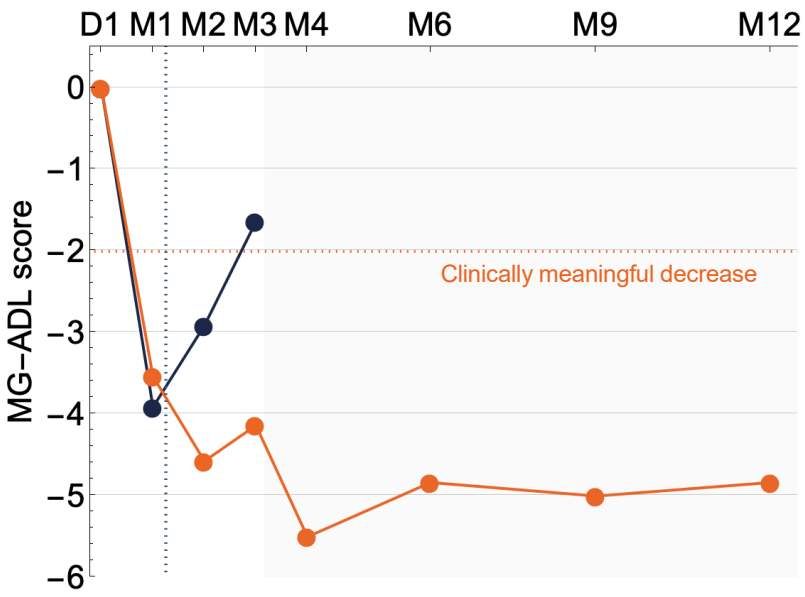
## KEY SECONDARY ENDPOINTS

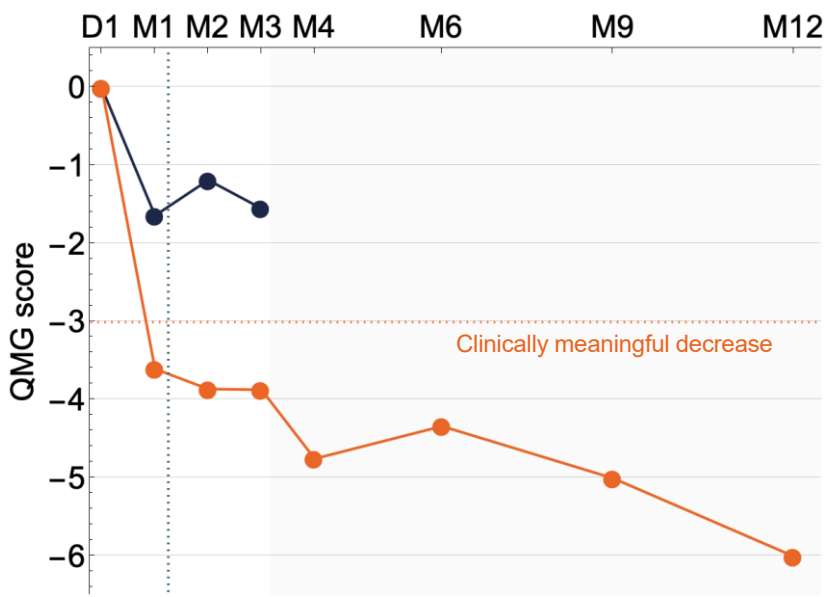
- Proportion of participants with MGC improvement of ≥4 points at Month 4
- MG-ADL and MGC change from baseline to Month 4
- Quantify clinical effect of Descartes-08 over 1 year

MG-ADL, Myasthenia Gravis Activities of Daily Living scale
gMG, Generalized myasthenia gravis
MGFA, Myasthenia Gravis Foundation of America
MGC, Myasthenia Gravis Composite
MG QMG, Quantitative MG Scores
MG QoL 15R, MG Quality of Life 15-revised
AChR Ab+, Acetylcholine receptor autoantibody positive

# Deepening responses observed in participants treated with Descartes-08

## Primary Efficacy Dataset




Descartes-08 Placebo

Month 3 (n=15), Month 4 to Month 12 (n=12*)
**Three participants lost to follow-up*

- Average MG-ADL reduction of 5.5 (±1.1) points at Month 4, **maintained through Month 12 (4.8±1.4)**
- Average QMG reduction of 4.8 (±1.7) points at Month 4, **deepened through Month 12 (6.0±2.1)**
- 83% of participants reaching Month 12 maintained clinically meaningful response

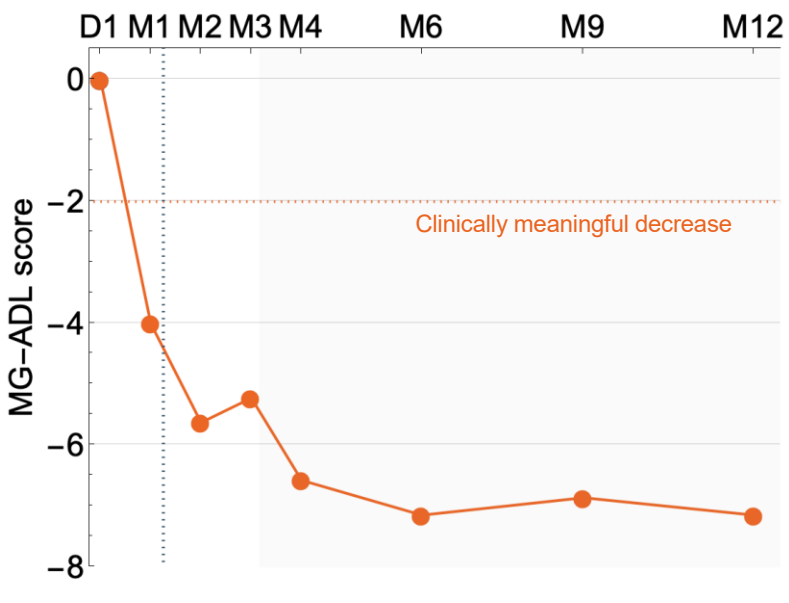
***33% of participants achieved minimum symptom expression at Month 6 and maintained it through Month 12***

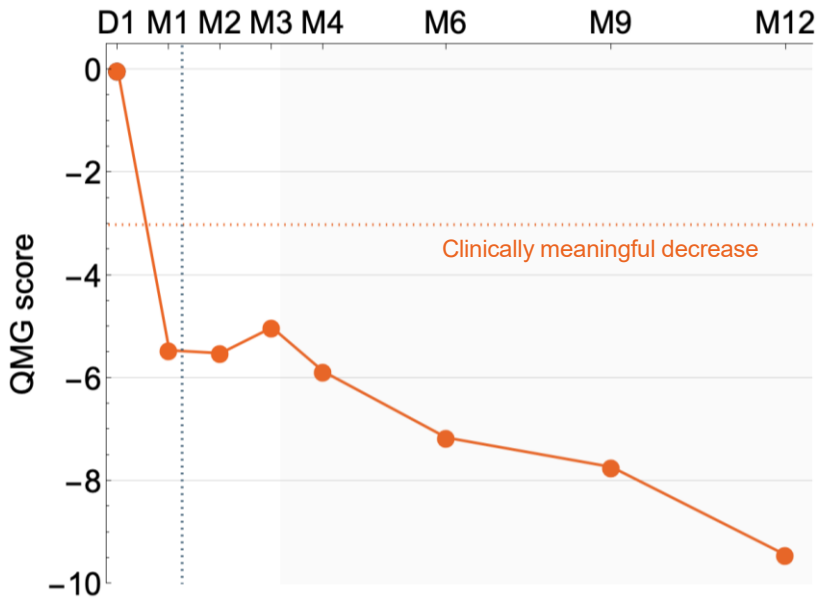


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# Deep responses observed in participants with no prior exposure to complement or FcRn inhibitors

**Primary Efficacy Dataset (No Prior Biologics)**




- Average MG-ADL reduction of 6.6 (±1.5) points at Month 4, **maintained through Month 12 (7.1±1.9)**
- Average QMG reduction of 6.0 (±2.3) points at Month 4, **deepened through Month 12 (9.4±2.3)**
- 100% of participants maintained clinically meaningful response at Month 12

**Descartes-08**

Month 3 (n=9), Month 4 (n=7*), Month 6 (n=7), Month 9 (n=7), Month 12 (n=7)
**Two participants lost to follow-up*

***57% of participants achieved minimum symptom expression at Month 6 and maintained it through Month 12***



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# Safety profile supports outpatient administration with no AEs reported after Month 3 through final follow-up

| | Descartes-08 (n=20) | | | Placebo (n=16) | | |
|---|---|---|---|---|---|---|
| | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| **Headache** | 7 (35%) | 4 (20%) | | 2 (13%) | 3 (19%) | |
| **Chills** | 8 (40%) | 4 (20%) | | | | |
| **Nausea** | 3 (15%) | 6 (30%) | | 1 (6%) | 2 (13%) | |
| **Fever** | 7 (35%) | 4 (20%) | 1 (5%) | | | |
| **Fatigue** | 4 (20%) | 1 (5%) | | 1 (6%) | | |
| **Myalgia** | 4 (20%) | 2 (10%) | | | | |
| **Infusion related reaction** | 1 (5%) | 2 (10%) | 1 (5%) | 1 (6%) | | |
| **Muscle weakness** | 1 (5%) | 1 (5%) | | 1 (6%) | | |
| **Arthralgia** | 1 (5%) | 1 (5%) | | | 1 (6%) | |
| **Tachycardia** | 3 (15%) | | | | | |
| **Upper respiratory infection** | | 1 (5%) | | | 1 (6%) | |
| **Herpes simplex reactivation** | 1 (5%) | | 1 (5%) | | | |
| **Dysgeusia** | 3 (15%) | | | | | |
| **Diarrhea** | 1 (5%) | | | | 1 (6%) | |
| **Sweating** | 1 (5%) | | | 1 (6%) | | |
| **Limb edema** | 1 (5%) | 1 (5%) | | | | |
| **Flushing** | 2 (10%) | | | | | |
| **Dyspnea** | 1 (5%) | 1 (5%) | | | | |
| **Insomnia** | 2 (10%) | | | | | |
| **Vomiting** | 2 (10%) | 1 (5%) | | | | |
| **Tremor** | 2 (10%) | | | | | |

- **Most commonly observed AEs through Month 3 include: headache, chills, nausea and fever, all of which typically resolved within 24 hours of infusion**
- **No AEs reported after Month 3**
- **No hypogammaglobulinemia or increased infections reported**
- **No difference in vaccine titers between Descartes-08 and placebo**

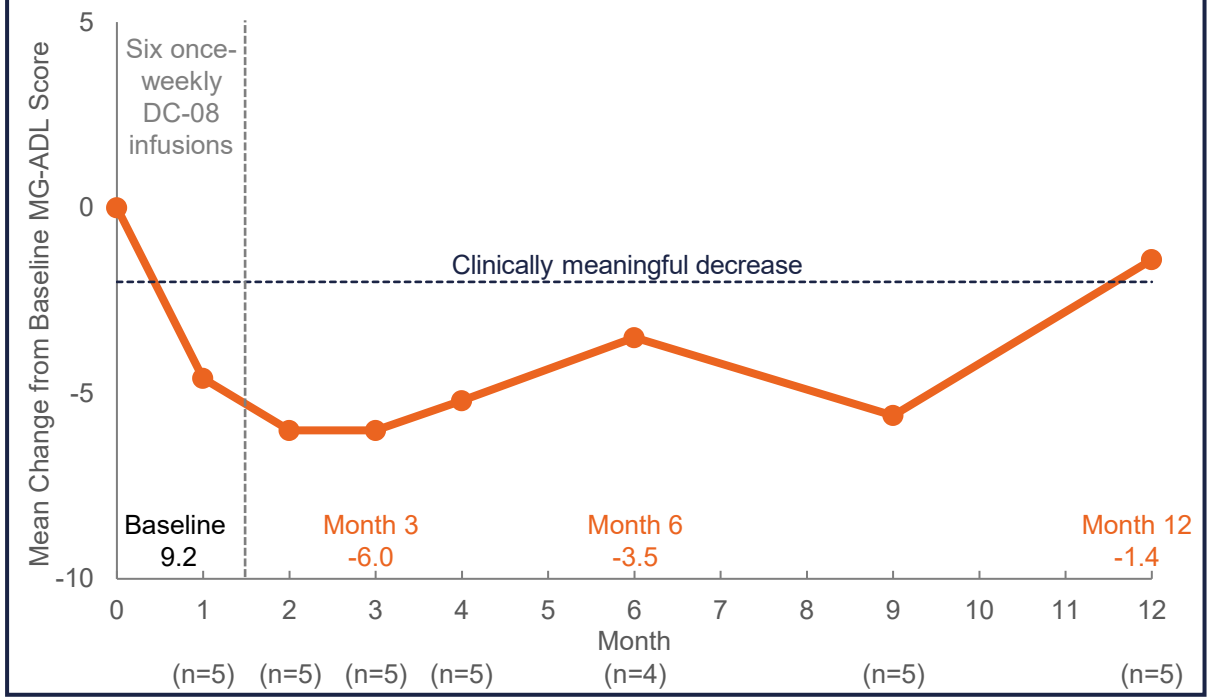
Total AEs reported through Month 12 for Descartes-08-treated patients and through Month 3 for placebo-treated patients

Safety dataset comprises all subjects who received at least one dose of Descartes-08 (n=20) or placebo (n=16)

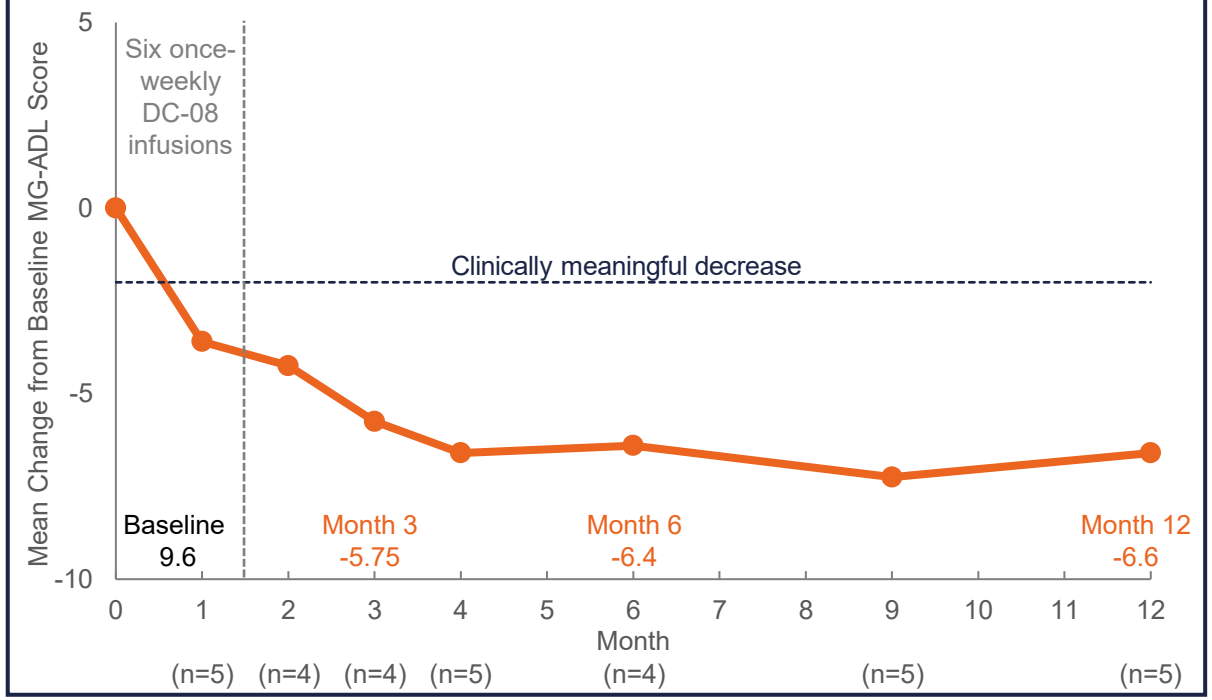
All Grade 1–2 adverse events deemed possibly, probably or definitely related to the study drug with a cumulative incidence ≥10% and all Grade 3 adverse events deemed possibly, probably or definitely related to the study drug are reported. There were no Grade 4 adverse events

# Retreatment of Descartes-08 highlights deep and durable responses in patients with MG with no new safety signals observed

## Initial Treatment




## Retreatment

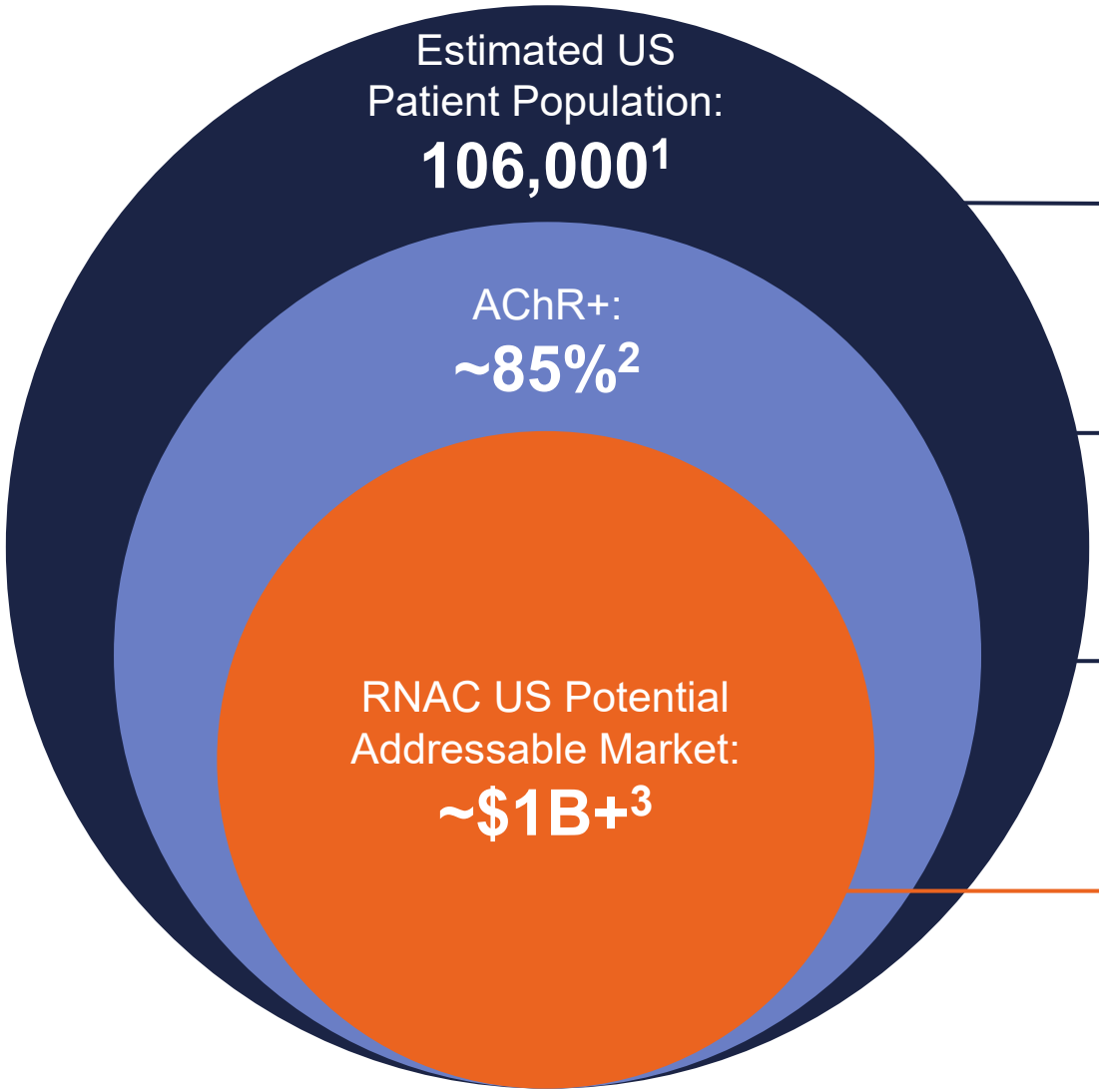



Patients retreated at a **median of 16.6 months following completion of initial treatment course experienced greater improvement in MG symptoms compared to initial course of treatment;** mean decrease in MG-ADL scores were sustained through 12 months following retreatment



DC-08, Descartes-08

# Current gMG market lacks disease modifying treatments creating the potential to access a $1B+ market opportunity for Descartes-08 in the US




## DESCARTES-08 OBSERVATIONS

**Significant reduction in MG-ADL of 7.1 at Month 12**[4] with a single course of therapy

**57% of patients achieved minimal symptom expression** at Month 6 and maintained it through Month 12[4]

Safety profile **supports biologic-like outpatient administration**

**Significant unmet need remains** given current treatment options, creating a potential $1B opportunity

1. Rodrigues et al. 2023
2. Lazaridis et al., 2020
3. Company internal projections, inclusive of opportunity to retreat patients
4. Metrics reflective of results from biologic naïve population



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# Descartes-08 is optimally designed for autoimmune diseases

## Key Characteristics for a Differentiated Therapy Designed for Patient Adoption in MG



**Durability of Response**
Descartes-08 delivers deep and durable responses through 12 months after a single course of therapy



**Single Course of Therapy**
Unlike current biologic therapies requiring chronic dosing and immunosuppression, Descartes-08 delivers deep and durable responses after a single course of therapy through a precision immune reset



**Outpatient Administration**
mRNA cell therapy enables reliable and safe outpatient dosing without lymphodepletion, avoiding the risks of CRS and ICANS



**Redosing Optionality**
The favorable safety profile of mRNA cell therapy enables repeat dosing if needed, providing flexibility



CRS, Cytokine release syndrome

ICANS, Immune effector cell-associated neurotoxicity syndrome

# Descartes-08
# Expansion into Myositis

# Expansion into myositis provides new opportunity in an area with significant unmet need and compelling market

## 80,000+

**Patients in the U.S.[1]**

**Characterized by debilitating muscle weakness and skin rashes[2]**



Limbs | Respiratory | Rashes | Swallowing

## 60%

**of Patients Eligible for a 3L+ Treatment[3]**

## Residual Unmet Needs in Myositis[4-5]

**Treatment options have limited efficacy** in broader organ involvement and refractory patients

**Better tolerated therapies desired** given concern over infusion-related reactions

Highly heterogenous disease leads to **suboptimal speed and accuracy of diagnosis**

***Refractory, moderate-to-severe** myositis patients likely to remain **underserved** despite new drug developments*

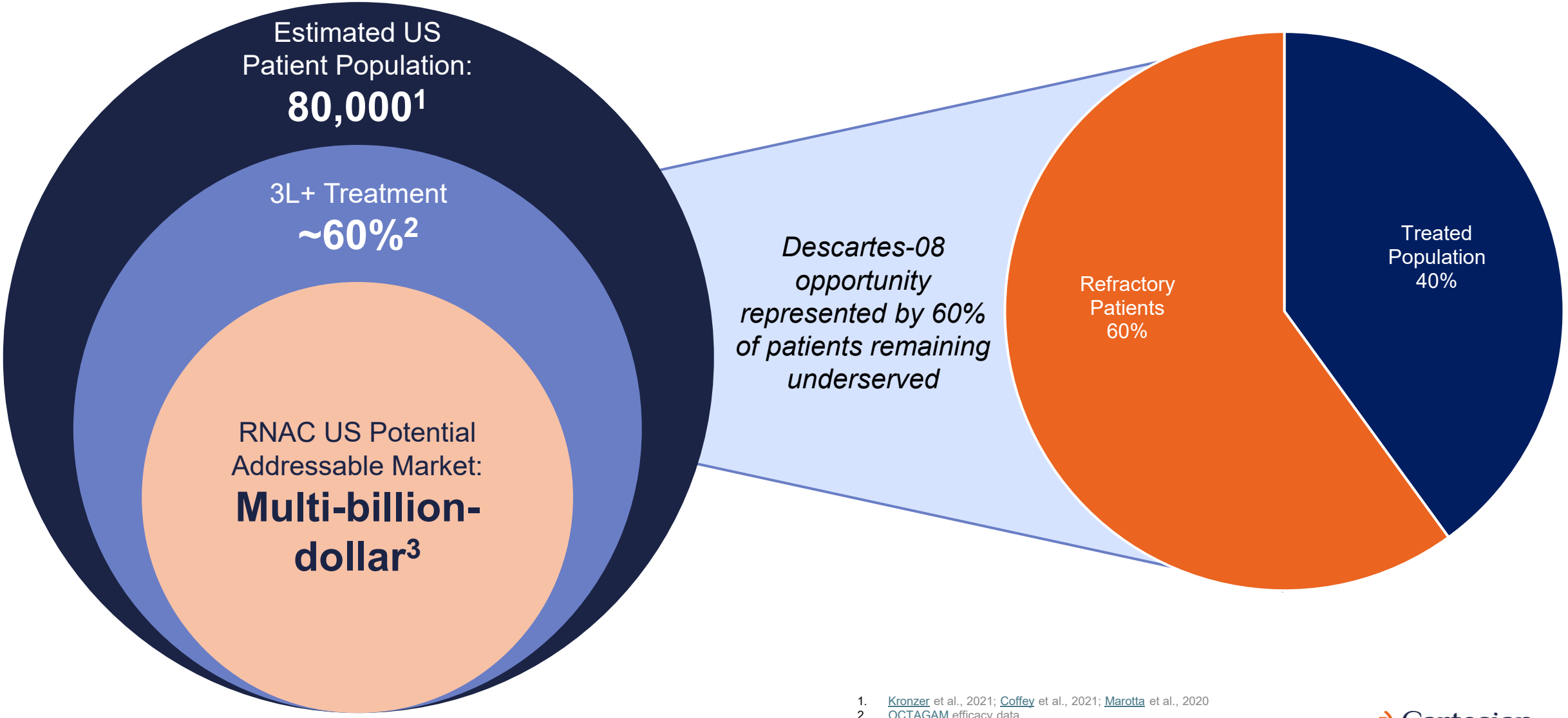
1. Kronzer et al., 2021; Coffey et al., 2021; Marotta et al., 2020
2. HSS - Myositis
3. OCTAGAM efficacy data
4. Gupta et al. 2023;
5. Meyer et al. 2019;



3L, 3rd line treatment

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# Strong mechanistic alignment with existing clinical data in MG and SLE underscores a potential multi-billion-dollar opportunity in myositis for Descartes-08




1. Kronzer et al., 2021; Coffey et al., 2021; Marotta et al., 2020
2. OCTAGAM efficacy data
3. Internal company projections, inclusive of opportunity to retreat patients



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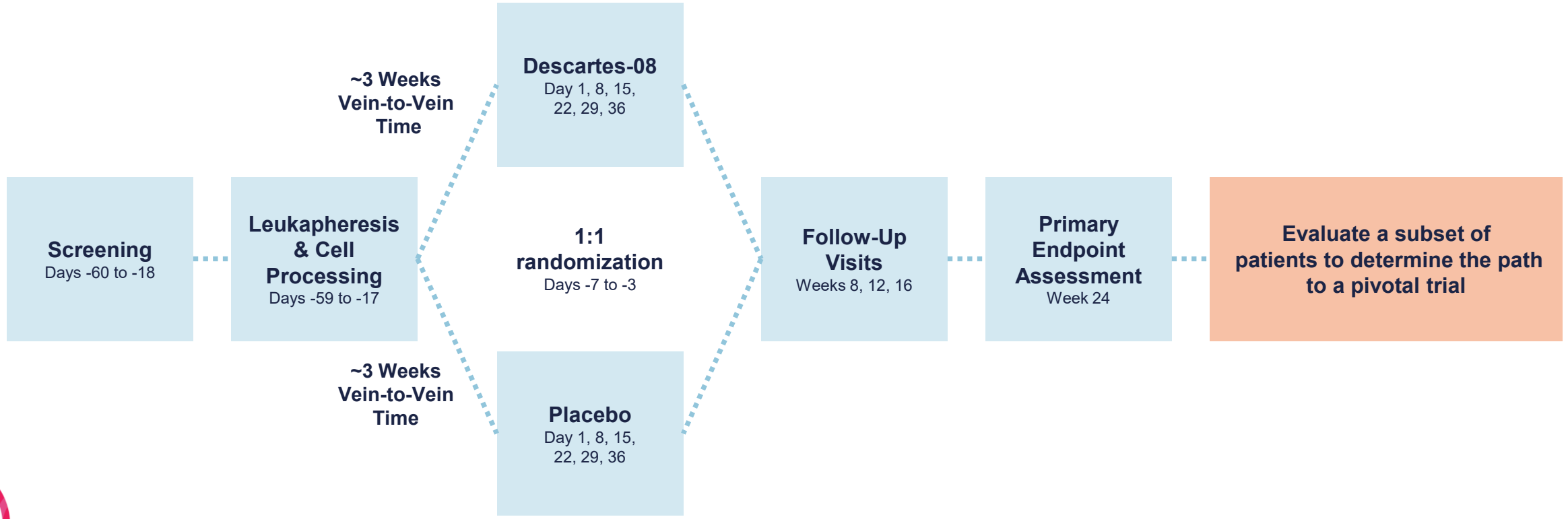
# Myositis seamless clinical trial design provides potential opportunity for single pivotal trial with data expected in 1H27

**INCLUSION CRITERIA**

Adults with moderate to severe multi-refractory dermatomyositis and antisynthetase syndrome

**PRIMARY OBJECTIVE**

Assess safety and efficacy of Descartes-08 compared to placebo added to standard of care in patients with myositis




triton TRIAL

# Phase 1/2 trial of Descartes-08 in children and young adults with autoimmune diseases initiated with data expected in 1H27

**DC-08's observed safety profile combined with significant unmet need in pediatric autoimmune disease supports clinical development plan**

- No lymphodepleting chemotherapy
- No integrating vectors
- Fully outpatient treatment with 1hr post-infusion monitoring
- No observed CRS or ICANS

## Anticipated Pediatric Basket Trial Timeline

- Rare Pediatric Disease Designation for DC-08 in juvenile dermatomyositis granted in September 2024
- Trial initiation announced on January 9, 2026
- Data expected in 1H27

helios TRIAL

**Juvenile Dermatomyositis**

→

**Dose escalation (n=3)**
**Week 1: DL 1**
**Week 2: DL 2**
**Week 3: DL 3**
**Weeks 4–6: DL 3 (if no DLTs)**

→

**Expansion (n=10)**

**Weeks 1–6: MTD once-weekly**

DL, Dose level
DLT, Dose limiting toxicity
MTD, Maximum tolerated dose
CRS, Cytokine release syndrome
ICANS, Immune effector cell-associated neurotoxicity syndrome

# In Vivo Expansion

# Strategic licensing agreement with WestGene Biopharma accelerates in vivo CAR-T development in autoimmune diseases

## EARLY PROOF OF CONCEPT ESTABLISHED FOR WESTGENE'S IN VIVO APPROACH

- Therapy dosed to date **demonstrated a favorable safety and tolerability profile**, with no DLTs, SAEs, ICANS, or IRRs reported*
- **Robust in vivo CAR-T generation following administration**, including high levels of circulating $CD8^+$ CAR-T cells and rapid, sustained B-cell depletion, observed in clinical data to date
- CAR expression and biological activity were maintained following repeat dosing, supporting the **potential for long-term, multi-cycle administration**

WestGene's LNP platform combined with Cartesian's mRNA payload from Descartes-08 **integrates two independently, clinically tested technologies with the goal of rapid clinical translation**

**Plans to advance multiple internally developed** next-gen anti-BCMA CAR constructs and a **BCMA-directed TCE** as part of Cartesian's expanding mRNA payload

Partnership provides an **accelerated and efficient path** to human clinical data

***In vivo CAR-T program, in partnership with WestGene, continues to advance through preclinical development***

*One subject experienced Grade 1 CRS
DLTs, dose-limiting toxicities
SAEs, serious adverse events
ICANS, Immune effector cell-associated neurotoxicity syndrome
IRRs, infusion-related reactions
LNP, targeted lipid nanoparticle
TCE, T-cell engager



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# Manufacturing

# Wholly-owned, in-house, US-based manufacturing



Over 35,000 sq. ft. state-of-the-art cGMP facility

Facility located in Frederick, MD

## FUTURE GROWTH

Clinical and commercial manufacturing scale capabilities support maturing pipeline and future growth

## QUICK TO ADAPT

Continuous process optimization creates opportunity for progressive margin expansion

## WHOLLY-OWNED

Ownership of quality control and production timelines

## COST EFFICIENT

Supports commercial readiness for MG launch with potential for biologic-like margins

cGMP, current good manufacturing practice



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FINANCIAL POSITION:

# Current Cash and Cash Equivalents Expected to Support Pipeline Through Key Milestones

**$124.7M**

In cash, cash equivalents and restricted cash

**~90 FULL TIME EMPLOYEES**

Based in Gaithersburg, MD and Frederick, MD

**30.5M**

Basic shares outstanding

**39.5M**

Fully diluted shares outstanding*

All metrics as of 9/30/26; includes cash, cash equivalents and restricted cash; excludes cash not yet drawn from credit facility with K2 HealthVentures
*Includes Series A Non-Voting Convertible Preferred Stock and Series B Non-Voting Convertible Preferred Stock that remain subject to beneficial ownership limitations that are convertible into shares of common stock and includes outstanding options, RSUs and warrants.



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# Our team | Management



Carsten Brunn, PhD
**PRESIDENT AND CEO**



Blaine Davis
**CHIEF FINANCIAL OFFICER**



Emily English, PhD
**CHIEF OPERATIONS OFFICER**



Peter Traber
**HEAD OF R&D**



Matthew Bartholomae
**GENERAL COUNSEL, SECRETARY**

# Key takeaways



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**US-based in-house manufacturing supports commercial readiness for MG launch** with potential biologic-like margins and full supply chain control – ongoing process optimization creates opportunity for further margin expansion.



**Cash runway into 2028**



MG, myasthenia gravis
JDM, juvenile dermatomyositis

CAR-T, chimeric antigen receptor T-cell therapy
*Internal company projections

# Appendix

# Descartes-08 is designed for dual action, precisely targeting two key BCMA+ cell populations involved in a spectrum of autoimmune diseases

Descartes-08 is designed to target BCMA, a surface antigen expressed on ***plasma cells/plasmablasts*** and ***plasmacytoid dendritic cells***

**PLASMA CELLS (PCs) AND PLASMABLASTS**

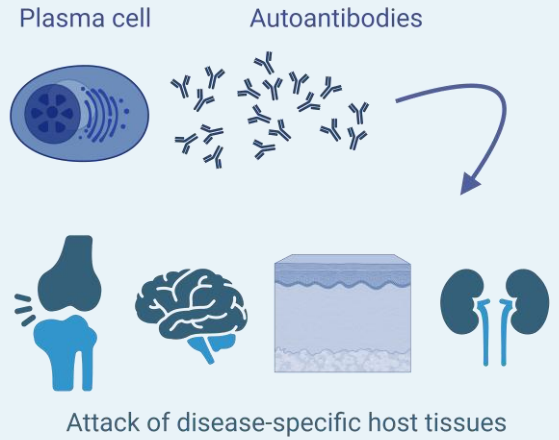
- PCs, plasmablasts and proliferating B cells targeted by Descartes-08 represent a tiny fraction of B cells
- These cells are entirely responsible for secreting pathogenic autoantibodies
- During autoimmunity, autoantibodies attack host tissue and drive inflammation

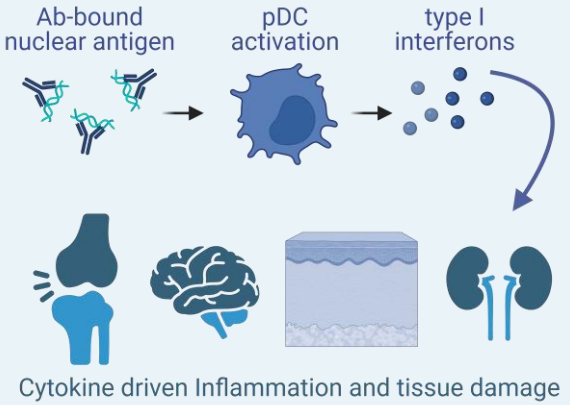
**PLASMACYTOID DENDRITIC CELLS (pDCs)**

- pDCs, which Descartes-08 is designed to target, are a rare subset of antigen-presenting cells
- These cells secrete high levels of cytokines (i.e., type I interferons) that cause inflammation and tissue damage during many human autoimmune diseases
- pDCs are increased in patients with autoimmunity and interfere with optimal treatment

Several autoimmune disease segments involve pathogenic contributions from ***both PCs/plasmablasts*** and ***pDCs***, including rheumatology, nephrology, neurology, and others

Selectively deleting PCs/plasmablasts and pDCs, if successful, may create a differentiated cell therapy platform



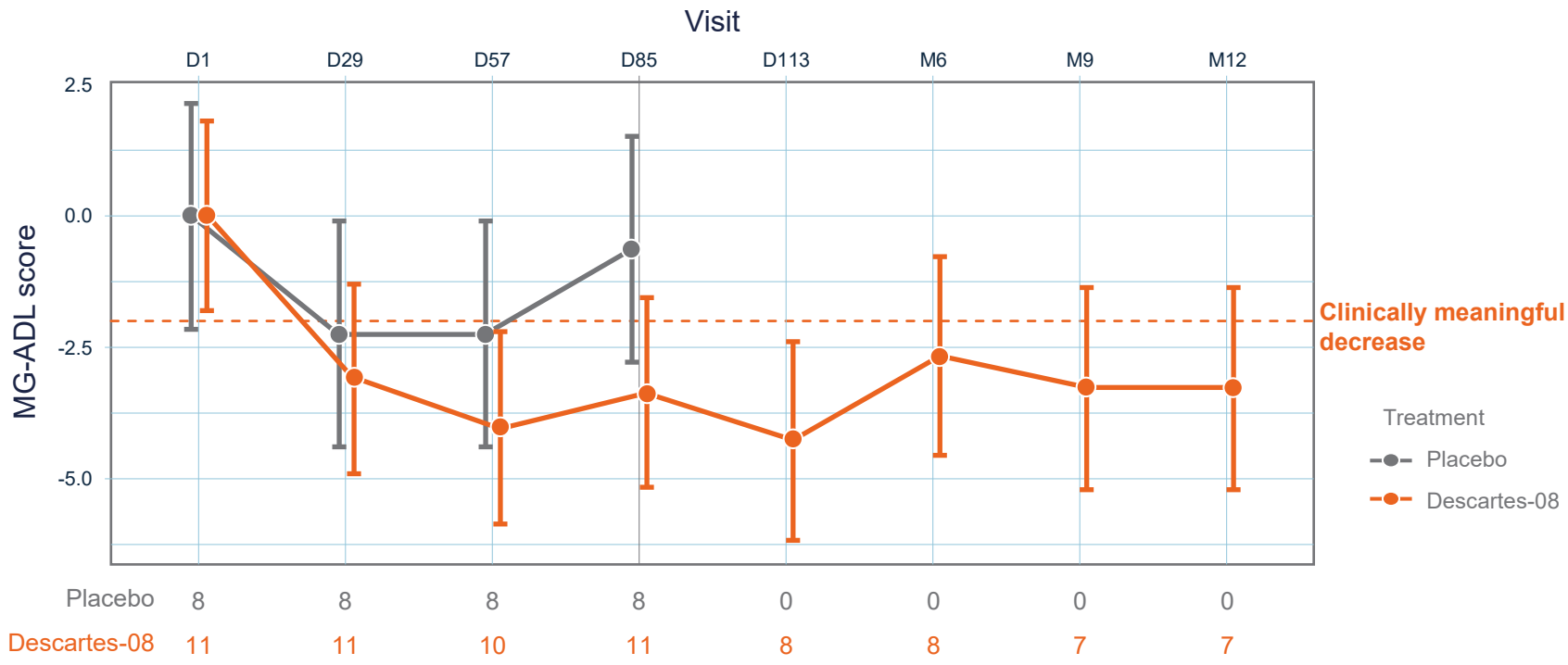






Cartesian therapeutics

# Meaningful reductions in MG-ADL at Month 3 were sustained through Month 12 with Descartes-08 in AChR+ gMG

There was a **significant** and **clinically meaningful reduction** in mean [SD] **MG-ADL score** at **Month 3** for the **Descartes-08 AChR+ group** versus placebo (-3.4 [2.8] vs -0.6 [2.9], p=0.0409), which was **sustained through Month 12**[1]

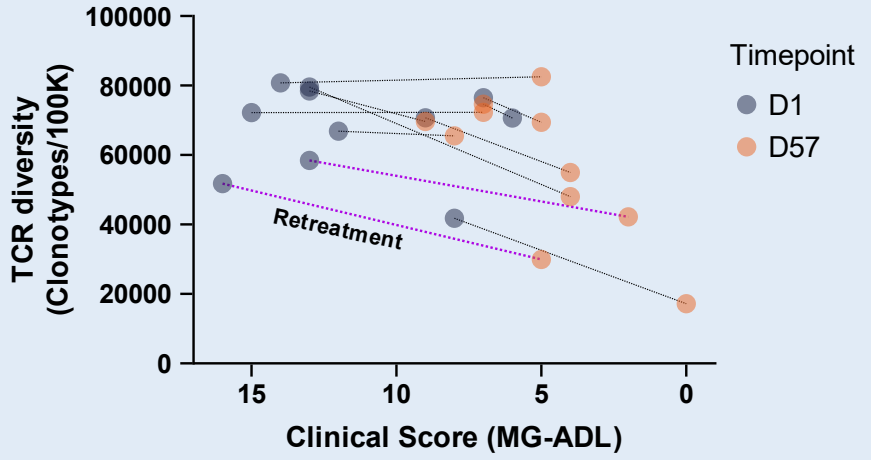





Cartesian therapeutics

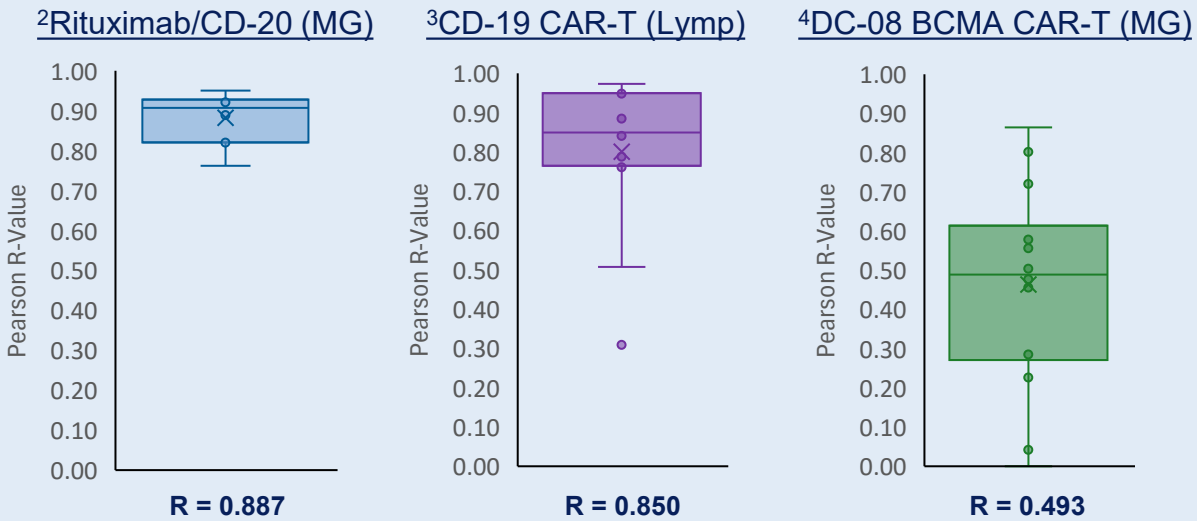
# Descartes-08 focuses the T-cell repertoire and selectively alters the autoreactome, showing clear biological activity

## Descartes-08 focuses the T-cell repertoire in a manner that correlates with clinical effect




p=0.048 (Wilcoxon signed rank test) TCR Diversity D57 vs D1

## Descartes-08 selectively alters the self-reactive branch of the antibody repertoire (i.e., autoreactome[1])




Data show Clinical Score and TCR Sequencing TCR Diversity (Downsampled Rearrangements) in Phase 2a samples analyzed at Adaptive Biotechnologies (R06 dataset). For certain subjects where TCR sequencing sample data was unavailable, D1 data was imputed from Screen, and D57 data was imputed from D85. Samples from one re-treated patient were analyzed as indicated. P-value is provided for Wilcoxon matched-pairs signed rank test on all primary-treatment data pairs from D1 vs D57.

[1]Bodansky et al., *Journal of Clinical Investigation* **2024**, doi: 10.1101/2023.12.19.23300188.

Serum analysis of [2]Myasthenia gravis patients receiving Rituximab targeting CD20+ B cells, [3]lymphoma patients receiving conventional CD19 DNA CAR-T, or [4]gMG patients following infusion with DC-08. Data compare D85 to D1 for MG open label cohort (N=13).



TCR, T-cell receptor