

ASX CEO Connect Presentation

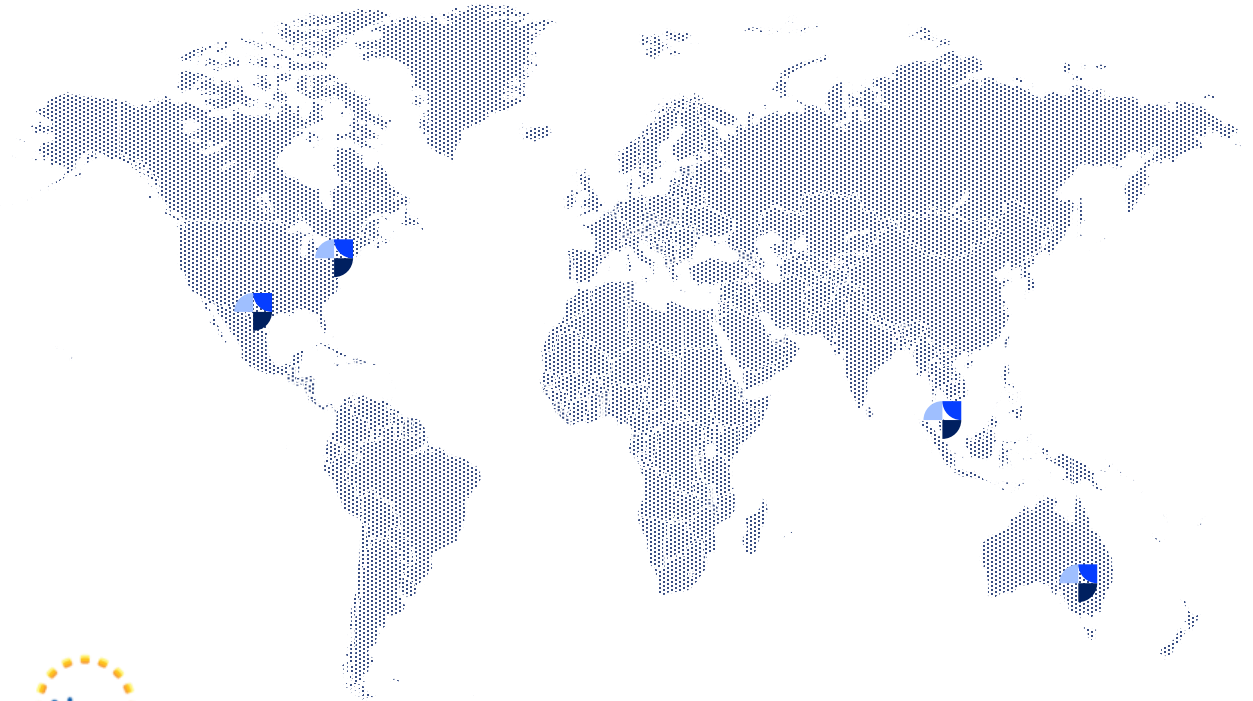
June 2026 | ASX: MSB; Nasdaq: MESO

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Mesoblast: Global Leader in Allogeneic (Off-the-Shelf) Cellular Medicines

- World leader in developing allogeneic (off-the-shelf) cellular medicines for the treatment of severe and life-threatening inflammatory conditions
- Locations in United States, Australia, and Singapore
- Listed on NASDAQ (MESO) and ASX (MSB)
- Developing product candidates for distinct indications based on its remestemcel-L and rexlemestrocet-L stromal cell technology platforms
- First FDA-approved product launched successfully
- Extensive global intellectual property portfolio with protection extending through to at least 2044 in all major markets
- FDA-inspected commercial scale manufacturing process and facilities



Ryoncil
(remestemcel-L-rknd)

**First FDA
approval**

THREE
Additional Major
Phase 3
Assets

**Robust
Pipeline**

**more than
1,100
patents &
applications**

Mesoblast First-In-Class Leader in Allogeneic Cellular Therapies



Ryonicil® Only FDA Approved MSC, Successful First US Launch

Net revenue has exceeded
US\$100M since launch last year

Highly profitable single product on
stand-alone basis

Proceeds from revenue generated
is being re-invested in label
extensions studies and
blockbuster opportunities



Commercial Capability Established

Infrastructure to support product
launches across multiple
expansion indications

Built specialized sales team
focused on hospitals, transplant
centers, and specialists



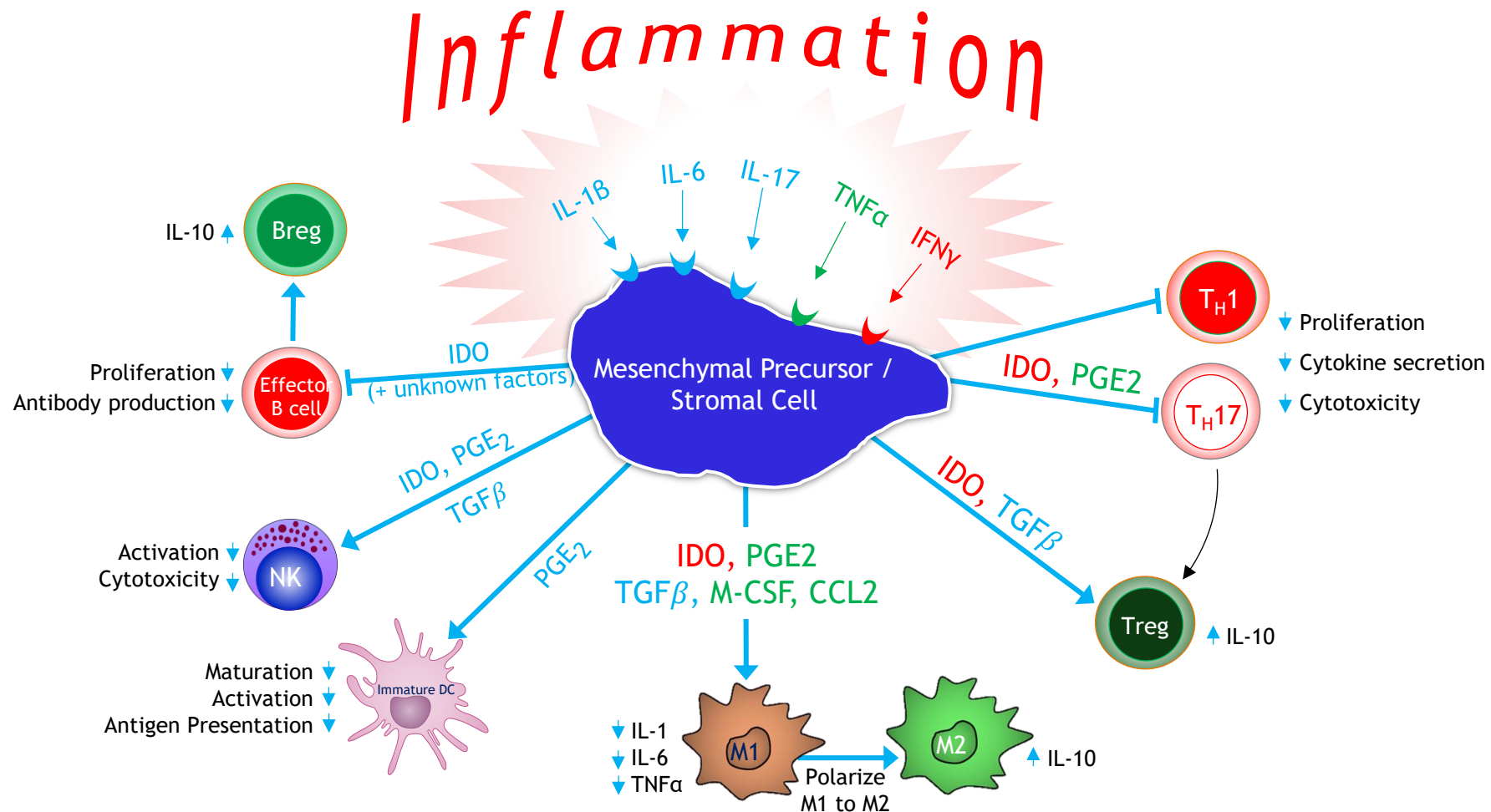
Pipeline with Multiple Blockbuster Opportunities

Phase 3 programs position
rexlemestrocel-L to transform the
treatment of low back pain with
degenerative disc disease, and
inflammatory heart failure

Phase 3 programs to extend
Ryonicil® label to adult aGvHD and
pediatric rare diseases such as
Duchenne Muscular Dystrophy

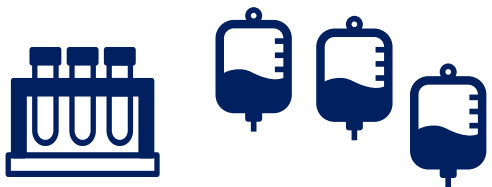
Mesenchymal Precursor / Stromal Cells Orchestrate Potent Anti-Inflammatory Cascade

Activation Via Multiple Surface Receptors Results In Powerful Multi-Modal Response That Cannot Be Achieved By Agents Targeting Single Pathways



Source: data on file

Advantages of Mesoblast's Proprietary Cell Technology Provides Significant Barriers to Entry in End-to-End Supply Chain



Scalable Production

- Scalable “off-the-shelf” cellular platforms
- Expansion without differentiation



Unique Off-the-Shelf (Allogeneic) Properties

- No expression of cell surface co-stimulatory molecules
- Do not induce immune reaction, no need for immunosuppression



Cutting Edge & Patented Know-How

- Validated potency assays ensure batch-to-batch consistency
- Proprietary media formulations and bioreactors for scale-up



Compelling Value Proposition

- A single donor ultimately supplies 1000's of vials
- Generation 2 process ~6x greater output/unit time.
- Increasing yield / decreasing COGS

Mesoblast Allogeneic Mesenchymal Stromal Cell Portfolio



This chart is figurative and does not purport to show individual trial progress within a clinical program

Notes:

- JCR Pharmaceuticals Co., Ltd. (JCR), has the right to develop mesenchymal stromal cells (MSCs) in certain fields for the Japanese market, including for the treatment of hematological malignancies, such as Graft vs Host Disease, and for hypoxic ischemic encephalopathy (HIE).
- Grünenthal has an exclusive license to develop and commercialize rexlemestrocel-L for chronic low back pain in Europe and Latin America/Caribbean.
- Tasly Pharmaceuticals has exclusive rights for rexlemestrocel-L for the treatment or prevention of chronic heart failure in China.

SR-aGvHD = Steroid-Refractory Acute Graft versus Host Disease;
 HFrEF = Heart Failure with Reduced Ejection Fraction; CLBP = Chronic Low Back Pain

RYONCIL Profitability to Fund Growth Pipeline

Successful U.S. commercial launch of RYONCIL

- Q3 FY26 gross revenue US\$35.3M, net revenue US\$30.3M
- RYONCIL gross profit 1H FY26, excluding amortization expense, was US\$44.2M. Direct selling costs were US\$7.7M

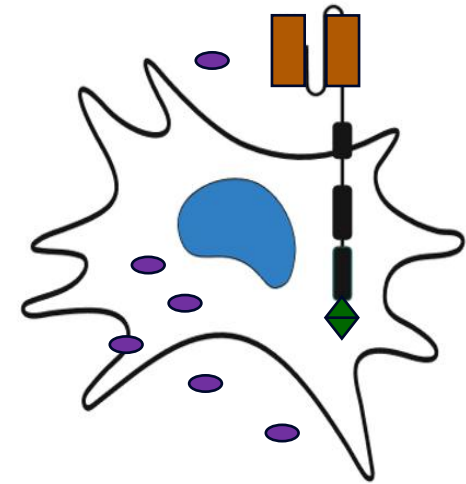
Strong operating performance in the period allowed us to invest in:

- R&D, including to support the Phase 3 trial on the blockbuster chronic low back pain indication
- Clinical programs for lifecycle extension
- Commercial manufacturing of Ryoncil® inventory as well as for launch of second-generation product



Next Generation Gene Modified MSCs – Enhanced Products for New Indications

- Mesoblast is leveraging the only FDA-approved MSC platform to create genetically-modified next gen products
- Enhanced (a) potency via payload (●) or triggered pathway (◆), and (b) targeting via antigen binding moiety (■)
- Two proprietary next gen platforms (patents through 2043)
 - **Chimeric Antigen Receptor “CAR-MSCs” developed at Mayo Clinic***
 - **Oncolytic Virus “OV-MSCs” developed at Baylor College of Medicine****
- IND-enabling development ongoing at each location



*Nat Biomed Eng. 2024 April ; 8(4): 443–460. doi:10.1038/s41551-024-01195-6;**<https://pubmed.ncbi.nlm.nih.gov/36989357>

CAR-MSC Platform



- Leverage tech behind CAR-T therapies *without* issues re: (i) safety and (ii) manufacturing
- Broad range of potential target antigens/intracellular pathway choices - plug and play system
- Enhanced targeting/increased potency can reduce dosing/COGS for all future indications
- Lead products target Lupus and UC/Crohn's, significant/unmet medical needs

Antigen/Product	Target Tissue	Potential Indication(s)	Triggered Intracellular Pathway
CD19-CAR-MSC	CD19 B Cells	Lupus	CD28z, TLR3, TLR4, CD28, IFNy
ECAD-CAR-MSC	Inflamed tissue	UC/Crohn's	
MOG-CAR-MSC	Myelin Sheath	MS	
COL2A1-CAR-MSC	Collagen	RA	
AMPA-CAR-MSC	Neurons	Alzheimer's	
CAR-MSC-CCN1	Skin	Wounds	

Strong Financial Position

Cash balance
US\$122M
at Mar 31, 2026

- RYONCIL net revenue exceeded US\$100 million since launch last year
- Net operating cash spend for Q3 FY26 was US\$4.1M
- The reduction in net operating cash spend was driven by receipts of US\$34.6 million and tight control of operating expenses
- Cost discipline approach to managing spend in-line with revenue
- Operating plan includes spend on Phase 3 programs, manufacturing for BLA filing and commercial inventory
- New term loan totaling US\$125M replaces existing higher-cost debt

Anticipated Major Upcoming Milestones

RYONCIL

Commercial

- Net revenue has exceeded US\$100M since launch
- Strategy in place to strongly grow revenue base
- Focused on increasing penetration of pediatric SR-aGvHD market

Label extension

- Funded by RYONCIL revenues
- Adult SR-aGvHD with BMT-CTN network, trial initiated, to complete in 12-18 months
- Pediatric Duchenne's Phase 3 IND cleared by FDA

Rexlemestrocel-L Blockbuster Programs

Chronic low back pain (CLBP)

- Achieved patient recruitment target in pivotal Phase 3 trial in April
- Top-line primary endpoint mid-CY2027
- BLA filing for FDA approval

Chronic heart failure (CHF)

- File BLA with FDA for end-stage heart failure patients on LVADs
- Will facilitate label-extension in NYHA II/III HFrEF with opportunity for strategic partnership





Thank You