UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16 under the Securities Exchange Act of 1934

For the month of June 2022

Commission File Number 001-37626

Mesoblast Limited

(*Exact name of Registrant as specified in its charter*)

Not Applicable
(*Translation of Registrant's name into English)*

Australia
(*Jurisdiction of incorporation or organization)*

Silviu Itescu
Chief Executive Officer and Executive Director
Level 38
55 Collins Street
Melbourne 3000
Australia
(*Address of principal executive offices*)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F:

Form 20-F ☑ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes ☐ No ☑

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes ☐ No ☑

INFORMATION CONTAINED ON THIS REPORT ON FORM 6-K

On May 31, 2022, Mesoblast Limited filed with the Australian Securities Exchange a new release announcement which is attached hereto as Exhibit 99.1, and is incorporated herein by reference.

On June 1, 2022, Mesoblast Limited filed with the Australian Securities Exchange a new release announcement and investor presentation, which are attached hereto as Exhibit 99.2 and Exhibit 99.3, and are incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly organized.

MESOBLAST LIMITED

/s/ Niva Sivakumar

Niva Sivakumar
Company Secretary

Dated: June 2, 2022

INDEX TO EXHIBITS

Item	
99.1	Press release of Mesoblast Ltd, dated May 31, 2022.
99.2	Press release of Mesoblast Ltd, dated June 1, 2022.
99.3	Investor presentation of Mesoblast Ltd, dated June 1, 2022.

asx announcement

mesoblast
the regenerative medicine company

SURVIVAL OUTCOMES IN COVID-19 ARDS PATIENTS TREATED WITH REMESTEMCEL-L

Melbourne, Australia; May 31 and New York, USA; May 30, 2022: Mesoblast Limited (ASX:MSB; Nasdaq:MESO), global leader in allogeneic cellular medicines for inflammatory diseases, today provided an update on survival outcomes from the randomized controlled trial of remestemcel-L in ventilator-dependent COVID-19 patients with moderate/severe acute respiratory distress syndrome (ARDS) and plans for a pivotal trial with collaborative investigators.

Through the initial 90 days, remestemcel-L reduced mortality by 48% compared to controls in a pre-specified analysis of 123 patients below age 65 (26% vs 44%, p=0.038),[1,2] but not in 97 patients over age 65, as previously reported. In an exploratory analysis in patients under age 65 who also received dexamethasone as part of their standard of care, remestemcel-L reduced 90-day mortality by 77% compared to controls (14% vs 48%, p=0.0037).[1,2] These early survival outcomes in the remestemcel-L group relative to controls were maintained at later timepoints in those under age 65, with a 42% reduction in mortality through 12 months and with continued observed synergy with dexamethasone ($p<0.05$).[1,2]

The Phase 2/3 trial in COVID ARDS randomized 1:1 to either standard of care alone or standard of care plus two doses of remestemcel-L 2 million cells/kg 3-5 days apart. This two-dose regimen of remestemcel-L was the same as in the earlier compassionate use program where 11 of 12 patients were younger than 65 and 75% successfully came off ventilatory support. These pilot study results were recently published in the peer-reviewed journal *Cytotherapy.*[3] In contrast, remestemcel-L is used at an eight-dose regimen of 2 million cells/kg over four weeks in patients with steroid-refractory acute graft versus host disease (SR-aGVHD). The established extended dosing regimen in SR-aGVHD, another severe inflammatory condition, provides a rationale for exploring an extended course of remestemcel-L in older patients with COVID ARDS who have higher levels of inflammation.

ARDS remains a major cause of mortality for COVID-19 patients who are immunocompromised, unvaccinated, or with comorbidities, as well as those with seasonal influenza and other pathogens. Mesoblast is working together with investigators from a clinical trial network focused on acute lung injury at over 40 sites across the United States affiliated with Vanderbilt University Medical Center to design and implement a pivotal trial of remestemcel-L to reduce mortality in high-risk patients with ARDS.

About Mesoblast

Mesoblast is a world leader in developing allogeneic (off-the-shelf) cellular medicines for the treatment of severe and life-threatening inflammatory conditions. The Company has leveraged its proprietary mesenchymal lineage cell therapy technology platform to establish a broad portfolio of late-stage product candidates which respond to severe inflammation by releasing anti-inflammatory factors that counter and modulate multiple effector arms of the immune system, resulting in significant reduction of the damaging inflammatory process.

Mesoblast has a strong and extensive global intellectual property portfolio with protection extending through to at least 2041 in all major markets. The Company's proprietary manufacturing processes yield industrial-scale, cryopreserved, off-the-shelf, cellular medicines. These cell therapies, with defined pharmaceutical release criteria, are planned to be readily available to patients worldwide.

Mesoblast is developing product candidates for distinct indications based on its remestemcel-L and rexlemestrocel-L allogeneic stromal cell technology platforms. Remestemcel-L is being developed for inflammatory diseases in children and adults including steroid refractory acute graft versus host disease, biologic-resistant inflammatory bowel disease, and acute respiratory distress syndrome. Rexlemestrocel-L is in development for advanced chronic heart failure and chronic low back pain. Two products have been commercialized in Japan and Europe by Mesoblast's licensees, and the Company has established commercial partnerships in Europe and China for certain Phase 3 assets.

Mesoblast has locations in Australia, the United States and Singapore and is listed on the Australian Securities Exchange (MSB) and on the Nasdaq (MESO). For more information, please see www.mesoblast.com, LinkedIn: Mesoblast Limited and Twitter: @Mesoblast

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Reference / Footnotes

1. All p-values are descriptive and not adjusted for multiplicity
2. Hazard Ratios calculated using Cox regression proportional hazards model without adjustment; p-value from log rank test
3. Whittaker Brown S., et al. Mesenchymal Stromal Cell Therapy for Acute Respiratory Distress Syndrome due to COVID-19. *Cytotherapy*, April 2022, https://doi.org/10.1016/j.jcyt.2022.03.006

Forward-Looking Statements

This press release includes forward-looking statements that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Forward-looking statements should not be read as a guarantee of future performance or results, and actual results may differ from the results anticipated in these forward-looking statements, and the differences may be material and adverse. Forward-looking statements include, but are not limited to, statements about: the initiation, timing, progress and results of Mesoblast's preclinical and clinical studies, and Mesoblast's research and development programs; Mesoblast's ability to advance product candidates into, enroll and successfully complete, clinical studies, including multi-national clinical trials; Mesoblast's ability to advance its manufacturing capabilities; the timing or likelihood of regulatory filings and approvals (including BLA resubmission), manufacturing activities and product marketing activities, if any; the commercialization of Mesoblast's product candidates, if approved; regulatory or public perceptions and market acceptance surrounding the use of stem-cell based therapies; the potential for Mesoblast's product candidates, if any are approved, to be withdrawn from the market due to patient adverse events or deaths; the potential benefits of strategic collaboration agreements and Mesoblast's ability to enter into and maintain established strategic collaborations; Mesoblast's ability to establish and maintain intellectual property on its product candidates and Mesoblast's ability to successfully defend these in cases of alleged infringement; the scope of protection Mesoblast is able to establish and maintain for intellectual property rights covering its product candidates and technology; estimates of Mesoblast's expenses, future revenues, capital requirements and its needs for additional financing; Mesoblast's financial performance; developments relating to Mesoblast's competitors and industry; and the pricing and reimbursement of Mesoblast's product candidates, if approved. You should read this press release together with our risk factors, in our most recently filed reports with the SEC or on our website. Uncertainties and risks that may cause Mesoblast's actual results, performance or achievements to be materially different from those which may be expressed or implied by such statements, and accordingly, you should not place undue reliance on these forward-looking statements. We do not undertake any obligations to publicly update or revise any forward-looking statements, whether as a result of new information, future developments or otherwise.

Release authorized by the Chief Executive.

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asx announcement

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OPERATIONAL HIGHLIGHTS AND FINANCIAL RESULTS FOR THE PERIOD ENDED MARCH 31, 2022

Substantial Reduction in Operational Spend while Maintaining Focus on BLA Resubmission

Melbourne, Australia; June 1 and New York, USA; May 31, 2022: Mesoblast Limited (ASX:MSB; Nasdaq:MESO) global leader in allogeneic cellular medicines for inflammatory diseases, today reported financial results and operational highlights for the period ended March 31, 2022.

Financial Highlights

- Net cash usage reported for operating activities in the quarter was reduced by 40%, or US$10.3 million, to US$15.5 million compared with US$25.8 million in the comparative quarter last year[1]
- For the quarter, net cash usage reported for operating activities, excluding inventory for the planned remestemcel-L product launch, was reduced by 50% to US$11.2 million from US$22.2 million in the comparative quarter
- For the nine-month period ended March 31, 2022, net cash usage reported for operating activities was reduced by 36%, or US$31.2 million, to US$54.8 million compared with US$86.0 million in the comparative period last year, and by 40% excluding inventory for the planned remestemcel-L product launch
- Revenues in the quarter were US$2.0 million, including US$1.9 million from TEMCELL® HS Inj.[2] royalties on sales for SR-aGvHD in Japan, an increase of 5% on the comparative quarter last year
- Revenues increased 46%, for the nine-month period ended March 31, 2022, to US$8.0 million compared with US$5.5 million in the comparative period last year
- Cash on hand at the end of the quarter was US$76.8 million, with up to an additional US$40 million available to be drawn down from existing financing facilities subject to certain milestones

Board and Management Highlights

- Philip R. Krause, M.D. joined the Board of Directors in March. Dr. Krause was for the past decade Deputy Director, Office of Vaccines Research and Review (OVRR) at the United States Food and Drug Administration's (FDA) Center for Biologics Evaluation and Research (CBER). Dr. Krause is currently Chair of the World Health Organization COVID Vaccines Research Expert Group, and most recently he shared responsibility for regulatory authorizations of COVID-19 vaccines in the US. Dr. Krause's deep insights and knowledge of regulatory processes will be invaluable to Mesoblast as it prepares its resubmission of the Biologics License Application (BLA) to the FDA for remestemcel-L in the treatment of children with steroid-refractory acute graft versus host disease (SR-aGVHD)
- Eric Rose, M.D. was appointed as the Company's Chief Medical Officer (CMO), having been a non-executive director of Mesoblast since 2013. Previously Chairman of Surgery at Columbia University's School of Medicine, Dr. Rose brings to his new role an extensive record of excellence in clinical development and successful interactions at the highest levels with key regulatory, industry and government stakeholders including the United States FDA, the National Institutes of Health (NIH), and the Biomedical Advanced Research and Development Authority (BARDA)

Operational Highlights for Remestemcel-L

Resubmission of the Biologics License Application (BLA) for remestemcel-L in the treatment of children with steroid-refractory graft versus host disease (SR-aGVHD) to the United States Food and Drug Administration (FDA)

- Mesoblast believes that the proposed potency assay measuring remestemcel-L's in vitro anti-inflammatory and immunomodulatory activity helps establish a clear understanding of remestemcel-L's mechanism of action in SR-aGVHD, and demonstrates relevance to the in vivo clinical effect of the product in the 54-patient Phase 3 trial in children with SR-aGVHD
- An investigator-initiated controlled study in children with SR-aGVHD stratified by baseline levels of inflammatory biomarkers, published late 2021 in the peer-reviewed journal *Bone Marrow Transplantation*,[3] showed that remestemcel-L provided a significant benefit in terms of both response and survival in children with the highest levels of inflammation and at greatest risk of death compared to best available therapy
- The study compared outcomes in 25 children from Mesoblast's Phase 3 trial of remestemcel-L in SR-aGVHD with 27 closely matched children from the Mount Sinai Acute GVHD International Consortium (MAGIC).[4] In children with baseline MAGIC Algorithm Probability (MAP) biomarker levels ≥0.29, a level associated with significant GI inflammation and damage, and which is predictive of poor treatment responses and very high mortality in SR-aGVHD, treatment with remestemcel-L resulted in 67% Day 28 Overall Response and 64% Day 180 overall survival compared with 10% Day 28 Overall Response and 10% Day 180 survival in the MAGIC cohort (both p=0.01) when treated with various biologics, including ruxolitinib
- The proposed potency assay demonstrates a relationship between the product's activity *in vitro* and its effects on survival in the Phase 3 trial, with the strongest correlation to survival in those patients at highest mortality risk as measured by clinical severity or high biomarker levels of inflammation
- Additionally, Mesoblast has now generated data from the expanded access program (EAP 275) of 241 children which confirm the ability of the *in-vitro* potency assay to measure product activity relevant to survival outcomes
- While global supply chain constraints impacted supply of assay kits during the quarter, our GMP contractor is now well resourced allowing final testing of product inventory for the BLA resubmission
- In preparation for the expected FDA review, Mesoblast last week completed a successful mock pre-approval inspection of its GMP manufacturing facility and process comprising both on-site and virtual inspections by external auditors
- Mesoblast will provide these new data to FDA and address all chemistry, manufacturing and controls (CMC) outstanding items as required for the planned BLA resubmission in the coming quarter. If the resubmission is accepted, CBER will consider the adequacy of the clinical data in the context of the related CMC issues

COVID-19 acute respiratory distress syndrome (ARDS)

- Provided an update on survival outcomes from the randomized controlled trial of remestemcel-L in ventilator-dependent COVID-19 patients with moderate/severe acute respiratory distress syndrome (ARDS) and plans for a pivotal trial with collaborative investigators
- Through the initial 90 days, remestemcel-L reduced mortality by 48% compared to controls in a pre-specified analysis of 123 patients below age 65 (26% vs 44%, p=0.038),[5,6] but not in 97 patients over age 65, as previously reported. In an exploratory analysis in 73 patients under age 65 who also received dexamethasone as part of their standard of care, remestemcel-L reduced 90-day mortality by 77% compared to controls (14% vs 48%, p=0.0037).[5,6] These early survival outcomes in the remestemcel-L group relative to controls

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were maintained at later timepoints in those under age 65, with a 42% reduction in mortality through 12 months and with continued observed synergy with dexamethasone ($p<0.05$)[5,6]

- The Phase 2/3 trial in COVID ARDS randomized 1:1 to either standard of care alone or standard of care plus two doses of remestemcel-L 2 million cells/kg 3-5 days apart. This two-dose regimen of remestemcel-L was the same as in the earlier compassionate use program where 11 of 12 patients were younger than 65 and 75% successfully came off ventilatory support. These pilot study results were recently published in the peer-reviewed journal *Cytotherapy*.[7] In contrast, remestemcel-L is used at an eight-dose regimen of 2 million cells/kg over four weeks in patients with steroid-refractory acute graft versus host disease (SR-aGVHD). The established extended dosing regimen in SR-aGVHD, another severe inflammatory condition, provides a rationale for exploring an extended course of remestemcel-L in older patients with COVID ARDS who have higher levels of inflammation
- ARDS remains a major cause of mortality for COVID-19 patients who are immunocompromised, unvaccinated, or with comorbidities, as well as those with seasonal influenza and other pathogens. Mesoblast is working together with investigators from a clinical trial network focused on acute lung injury at over 40 sites across the United States affiliated with Vanderbilt University Medical Center to design and implement a pivotal trial of remestemcel-L to reduce mortality in high-risk patients with ARDS

Inflammatory Bowel Disease

- Results from an interim analysis of the first cohort of patients from the randomized, controlled study of remestemcel-L by direct endoscopic delivery to areas of inflammation in patients with medically refractory ulcerative colitis or Crohn's colitis were published in the *Journal of Crohn's and Colitis*.[8,9] A single local delivery of remestemcel-L by colonoscopy resulted in rapid mucosal healing, improved clinical and endoscopic scores as early as two weeks following remestemcel-L, and a high incidence of disease remission by six weeks

Operational Highlights for Rexlemestrocel-L

Chronic Heart Failure

- Dr. Eugene Braunwald who has often been called the father of modern cardiology and the most frequently cited author in cardiology,[10] last month wrote an opinion piece in European Heart Journal titled *Cardiac cell therapy: a call for action*.[11] The paper highlighted next generation mesenchymal stromal (bone marrow-derived) cells as attractive candidates for cardiac cell therapy (CCT). He specifically highlighted the clinical outcomes observed in Mesoblast's DREAM-HF Phase 3 trial and pointed out the company's commercial leadership globally in the field of CCT for heart failure
- Mesoblast received feedback in Q4 CY2021 from FDA confirming that reduction in major adverse cardiovascular events (MACE) of cardiovascular mortality or irreversible morbidity (non-fatal heart attack or stroke) is an acceptable clinically meaningful endpoint for determining the treatment benefit of rexlemestrocel-L for patients with chronic heart failure and low ejection fraction (HFrEF). In December, following FDA guidance, Mesoblast presented additional top-line results in pre-specified high-risk groups in the DREAM-HF Phase 3 trial of rexlemestrocel-L in HFrEF which showed that the greatest treatment benefit is in patients with diabetes and/or myocardial ischemia (72% of total treated population), a target population at very high risk for mortality and irreversible morbidity due to micro- and macro-vascular disease despite receiving optimal standard of care therapies[12]
- Mesoblast expects to receive further guidance from FDA on a potential approval pathway following detailed review of the outcomes identified in high-risk HFrEF patients with diabetes and/or myocardial ischemia

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Chronic Low Back Pain

- Presented 36-month follow-up results from the 404-patient Phase 3 trial of rexlemestrocel-L (MPC-06-ID) in patients with chronic low back pain (CLBP) associated with degenerative disc disease (DDD) which showed durable reduction in back pain lasting at least three years from a single intra-discal injection of rexlemestrocel-L+hyaluronic acid (HA) carrier
- Mesoblast received feedback in December 2021 from FDA on the Phase 3 program for CLBP and plans to conduct an additional US Phase 3 trial which may support submissions for potential approval in both the US and EU. Following review of the completed Phase 3 trial data, FDA agreed with Mesoblast's proposal for pain reduction at 12 months as the primary endpoint of the next trial, with functional improvement and reduction in opioid use as secondary endpoints

FINANCIAL RESULTS FOR THE PERIOD ENDED MARCH 31, 2022 (THIRD QUARTER FY2022)

- **Total Revenue** increased by 5% from the comparative quarter last year to US$2.0 million for the third quarter FY2022, including US$1.9 million from TEMCELL® HS Inj.[2] royalties on sales for SR-aGvHD in Japan
- **Cash on hand** at the end of the quarter was US$76.8 million, with up to an additional US$40 million available to be drawn down from existing financing facilities subject to certain milestones
- **Net cash usage** for operating activities in the quarter was reduced by 40%, or US$10.3 million, to US$15.5 million compared with US$25.8 million in the comparative quarter last year
- **Research & Development expenses** reduced by US$4.2 million (34%), down to US$8.2 million for the third quarter FY2022 from US$12.4 million for the third quarter FY2021 as clinical trial activities for our COVID-19 ARDS, CLBP and CHF product candidates reduced given clinical trial recruitment and data analysis is now complete
- **Manufacturing expense** were US$5.6 million for the third quarter FY2022, compared to US$7.3 million for the third quarter FY2021. During the quarter we continued to build our pre-launch inventory levels of remestemcel-L to support the commercial launch for SR-aGVHD

  We expect to recognize the US$29.7 million balance of remestemcel-L pre-launch inventory, and the balance of any further production completed at that time, on our balance sheet if we receive FDA approval
- **Management and Administration** expenses decreased from US$8.1 million for the third quarter FY2021 to US$7.6 million for the third quarter FY2022; this decrease was predominantly due to one-off expenditure in legal and professional fees associated with regulatory and financing activities in the third quarter FY2021
- **Remeasurement of Contingent Consideration** reduced to a gain of US$0.7 million for the third quarter FY2022 whereas a gain of US$1.5 million was recognized in the third quarter FY2021 as a result of revaluing future third party payments
- **Fair value movement of warrants** we recognized a gain of US$0.9 million in the third quarter FY2022, compared to Nil for the third quarter FY2021
- **Finance Costs** for borrowing arrangements with Oaktree and NovaQuest were US$3.9 million for the third quarter FY2022, compared to US$3.2 million for the third quarter FY2021

Loss after tax for the third quarter FY2022 was US$21.3 million compared to US$26.5 million for the third quarter FY2021. The net loss attributable to ordinary shareholders was 3.28 US cents per share for the third quarter FY2022, compared with 4.39 US cents per share for the third quarter FY2021.

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Conference Call

There will be a webcast today, beginning at 8.30am AEST (Wednesday, June 1); 6.30pm EDT (Tuesday, May 31). It can be accessed via: https://webcast.openbriefing.com/8756/

The archived webcast will be available on the Investor page of the Company's website: www.mesoblast.com

About Mesoblast

Mesoblast is a world leader in developing allogeneic (off-the-shelf) cellular medicines for the treatment of severe and life-threatening inflammatory conditions. The Company has leveraged its proprietary mesenchymal lineage cell therapy technology platform to establish a broad portfolio of late-stage product candidates which respond to severe inflammation by releasing anti-inflammatory factors that counter and modulate multiple effector arms of the immune system, resulting in significant reduction of the damaging inflammatory process.

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Reference / Footnotes

1. Accounting policy change resulted in a US$1.4 million benefit in the Mar 22 quarter.
2. TEMCELL® HS Inj. is a registered trademark of JCR Pharmaceuticals Co. Ltd.
3. Kasikis S., et al. Mesenchymal stromal cell therapy induces high responses and survival in children with steroid refractory GVHD and poor risk. *Bone Marrow Transplantation* 2021; https://doi.org/10.1038/s41409-021-01442-3
4. Mount Sinai Acute GVHD International Consortium (MAGIC) - a group of ten BMT centers throughout the US and Europe whose purpose is to conduct ground-breaking clinical trials in GVHD, including developing informative biorepositories that assist in developing treatments that can guide GVHD therapy
5. All p-values are descriptive and not adjusted for multiplicity
6. Hazard Ratios calculated using Cox regression proportional hazards model without adjustment; p-value from log rank test
7. Whittaker Brown S., et al. Mesenchymal Stromal Cell Therapy for Acute Respiratory Distress Syndrome due to COVID-19. *Cytotherapy*, April 2022, https://doi.org/10.1016/j.jcyt.2022.03.006
8. Lightner A., et al. A Phase IB/IIA study of remestemcel-L, an allogeneic bone marrow derived mesenchymal stem cell product, for the treatment of medically refractory Crohn's colitis: A preliminary analysis. *Journal of Crohn's and Colitis*, Volume 16, Issue Supplement_1, January 2022, Pages i412–i413, https://doi.org/10.1093/ecco-jcc/jjab232.555
9. Lightner A., et al. A Phase IB/IIA study of remestemcel-L, an allogeneic bone marrow derived mesenchymal stem cell product, for the treatment of medically refractory ulcerative colitis: An interim analysis. *Journal of Crohn's and Colitis*, Volume 16, Issue Supplement_1, January 2022, Pages i398–i399, https://doi.org/10.1093/ecco-jcc/jjab232.534

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10. Neill US. Conversations with Giants in Medicine – A conversation with Eugene Braunwald. *J Clin Invest.* 2013;123(1):1-2. https://doi.org/10.1172/JCI67778
11. Braunwald E. Cardiac cell therapy: a call for action. *European Heart Journal* (2022) 00, 1–2, https://doi.org/10.1093/eurheartj/ehac188
12. Dunlay SM., et al. *Circulation*. 2019;140:e294–e324

Forward-Looking Statements
This press release includes forward-looking statements that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Forward-looking statements should not be read as a guarantee of future performance or results, and actual results may differ from the results anticipated in these forward-looking statements, and the differences may be material and adverse. Forward-looking statements include, but are not limited to, statements about: the initiation, timing, progress and results of Mesoblast's preclinical and clinical studies, and Mesoblast's research and development programs; Mesoblast's ability to advance product candidates into, enroll and successfully complete, clinical studies, including multi-national clinical trials; Mesoblast's ability to advance its manufacturing capabilities; the timing or likelihood of regulatory filings and approvals (including BLA resubmission), manufacturing activities and product marketing activities, if any; the commercialization of Mesoblast's product candidates, if approved; regulatory or public perceptions and market acceptance surrounding the use of stem-cell based therapies; the potential for Mesoblast's product candidates, if any are approved, to be withdrawn from the market due to patient adverse events or deaths; the potential benefits of strategic collaboration agreements and Mesoblast's ability to enter into and maintain established strategic collaborations; Mesoblast's ability to establish and maintain intellectual property on its product candidates and Mesoblast's ability to successfully defend these in cases of alleged infringement; the scope of protection Mesoblast is able to establish and maintain for intellectual property rights covering its product candidates and technology; estimates of Mesoblast's expenses, future revenues, capital requirements and its needs for additional financing; Mesoblast's financial performance; developments relating to Mesoblast's competitors and industry; and the pricing and reimbursement of Mesoblast's product candidates, if approved. You should read this press release together with our risk factors, in our most recently filed reports with the SEC or on our website. Uncertainties and risks that may cause Mesoblast's actual results, performance or achievements to be materially different from those which may be expressed or implied by such statements, and accordingly, you should not place undue reliance on these forward-looking statements. We do not undertake any obligations to publicly update or revise any forward-looking statements, whether as a result of new information, future developments or otherwise.

Release authorized by the Chief Executive.

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Consolidated Income Statement

(in U.S. dollars, in thousands, except per share amount)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021	Nine Months Ended March 31, 2022	Nine Months Ended March 31, 2021
Revenue	2,011	1,915	7,988	5,461
Research & development	(8,250)	(12,441)	(27,776)	(45,957)
Manufacturing commercialization	(5,590)	(7,332)	(19,717)	(25,706)
Management and administration	(7,567)	(8,087)	(21,259)	(23,633)
Fair value remeasurement of contingent consideration	672	1,534	601	18,103
Fair value remeasurement of warrant liability	896	—	3,048	—
Other operating income and expenses	392	1,025	(13)	1,420
Finance costs	(3,911)	(3,227)	(12,951)	(7,193)
Loss before income tax	**(21,347)**	**(26,613)**	**(70,079)**	**(77,505)**
Income tax benefit/(expense)	45	98	187	754
Loss attributable to the owners of Mesoblast Limited	**(21,302)**	**(26,515)**	**(69,892)**	**(76,751)**
Losses per share from continuing operations attributable to the ordinary equity holders of the Group:	**Cents**	**Cents**	**Cents**	**Cents**
Basic - losses per share	(3.28)	(4.39)	(10.78)	(12.99)
Diluted - losses per share	(3.28)	(4.39)	(10.78)	(12.99)

Consolidated Statement of Comprehensive Income

(in U.S. dollars, in thousands)	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021	Nine Months Ended March 31, 2022	Nine Months Ended March 31, 2021
Loss for the period	**(21,302)**	**(26,515)**	**(69,892)**	**(76,751)**
Other comprehensive (loss)/income				
Items that may be reclassified to profit and loss				
Exchange differences on translation of foreign operations	(333)	(2,712)	(516)	(1,400)
Items that will not be reclassified to profit and loss				
Financial assets at fair value through other comprehensive income	(314)	81	(48)	109
Other comprehensive (loss)/income for the period, net of tax	**(647)**	**(2,631)**	**(564)**	**(1,291)**
Total comprehensive losses attributable to the owners of Mesoblast Limited	**(21,949)**	**(29,146)**	**(70,456)**	**(78,042)**

Mesoblast Limited
ABN 68 109 431 870

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Consolidated Balance Sheet

(in U.S. dollars, in thousands)	As of March 31, 2022	As of June 30, 2021
Assets		
Current Assets		
Cash & cash equivalents	76,760	136,881
Trade & other receivables	5,634	4,842
Prepayments	5,739	6,504
Total Current Assets	**88,133**	**148,227**
Non-Current Assets		
Property, plant and equipment	2,243	3,021
Right-of-use assets	8,363	9,119
Financial assets at fair value through other comprehensive income	2,032	2,080
Other non-current assets	1,973	1,724
Intangible assets	578,945	580,546
Total Non-Current Assets	**593,556**	**596,490**
Total Assets	**681,689**	**744,717**
Liabilities		
Current Liabilities		
Trade and other payables	18,983	19,598
Provisions	20,216	18,710
Borrowings	5,523	53,200
Lease liabilities	2,431	2,765
Warrant liability	5,033	—
Total Current Liabilities	**52,186**	**94,273**
Non-Current Liabilities		
Provisions	13,179	17,017
Borrowings	88,646	41,045
Lease liabilities	8,051	8,485
Deferred consideration	2,500	2,500
Total Non-Current Liabilities	**112,376**	**69,047**
Total Liabilities	**164,562**	**163,320**
Net Assets	**517,127**	**581,397**
Equity		
Issued Capital	1,165,309	1,163,153
Reserves	69,279	65,813
(Accumulated losses)/retained earnings	(717,461)	(647,569)
Total Equity	**517,127**	**581,397**

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Consolidated Statement of Cash Flows

(in U.S. dollars, in thousands)	Nine Months Ended March 31, 2022	2021
Cash flows from operating activities		
Commercialization revenue received	7,969	4,162
Government grants and tax incentives received	24	56
Payments to suppliers and employees (inclusive of goods and services tax)	(59,855)	(86,029)
Interest received	5	17
Income taxes paid	(31)	(35)
Net cash (outflows) in operating activities	**(51,888)**	**(81,829)**
Cash flows from investing activities		
Investment in fixed assets	(110)	(1,424)
Payments for intellectual property	(75)	—
Net cash (outflows) in investing activities	**(185)**	**(1,424)**
Cash flows from financing activities		
Proceeds from borrowings	51,919	—
Repayment of borrowings	(55,458)	—
Payment of transaction costs from borrowings	(5,513)	(13)
Interest and other costs of finance paid	(4,317)	(4,122)
Proceeds from issue of shares	209	105,584
Proceeds from issue of warrants	8,081	12,969
Payments for share issue costs	(216)	(1,547)
Payments for lease liabilities	(2,359)	(2,100)
Net cash inflows/(outflows) by financing activities	**(7,654)**	**110,771**
Net increase/(decrease) in cash and cash equivalents	(59,727)	27,518
Cash and cash equivalents at beginning of period	136,881	129,328
FX gain/(losses) on the translation of foreign bank accounts	(394)	1,417
Cash and cash equivalents at end of period	**76,760**	**158,263**

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Exhibit 99.3

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Global Leader in Allogeneic Cellular Medicines for Inflammatory Diseases

Operational Highlights & Financial Results for the Period Ended March 31, 2022

June 2022

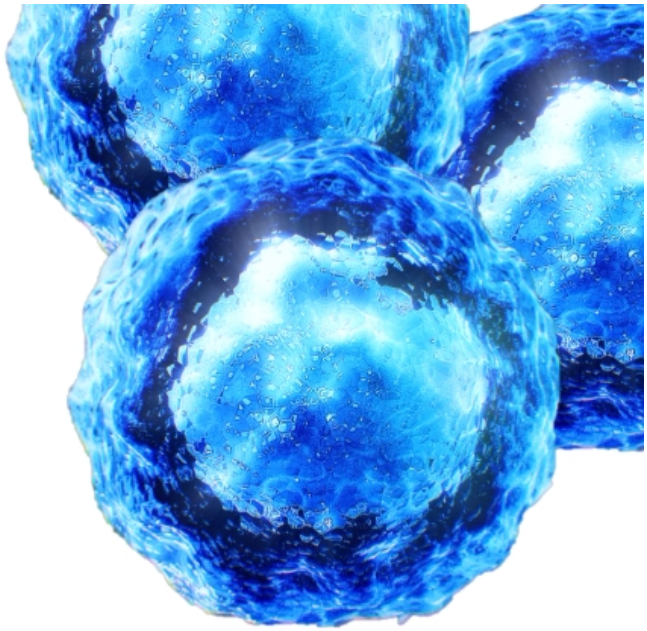
ASX: MSB; Nasdaq: MESO

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This presentation includes forward-looking statements that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We make such forward- looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this presentation are forward-looking statements. Words such as, but not limited to, "believe," "expect," "anticipate," "estimate," "intend," "plan," "targets," "likely," "will," "would," "could," and similar expressions or phrases identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and future events , recent changes in regulatory laws, and financial trends that we believe may affect our financial condition, results of operation, business strategy and financial needs. These statements may relate to, but are not limited to: expectations regarding the safety or efficacy of, or potential applications for, Mesoblast's adult stem cell technologies; expectations regarding the strength of Mesoblast's intellectual property, the timeline for Mesoblast's regulatory approval process, and the scalability and efficiency of manufacturing processes; expectations about Mesoblast's ability to grow its business and statements regarding its relationships with current and potential future business partners and future benefits of those relationships; statements concerning Mesoblast's share price or potential market capitalization; and statements concerning Mesoblast's capital requirements and ability to raise future capital, among others. Forward-looking statements should not be read as a guarantee of future performance or results, and actual results may differ from the results anticipated in these forward-looking statements, and the differences may be material and adverse. You should read this presentation together with our financial statements and the notes related thereto, as well as the risk factors, in our most recently filed reports with the SEC or on our website. Uncertainties and risks that may cause Mesoblast's actual results, performance or achievements to be materially different from those which may be expressed or implied by such statements, include, without limitation: risks inherent in the development and commercialization of potential products; uncertainty of clinical trial results or regulatory approvals or clearances; government regulation; the need for future capital; dependence upon collaborators; and protection of our intellectual property rights, among others. Accordingly, you should not place undue reliance on these forward-looking statements. We do not undertake any obligations to publicly update or revise any forward-looking statements, whether as a result of new information, future developments or otherwise.

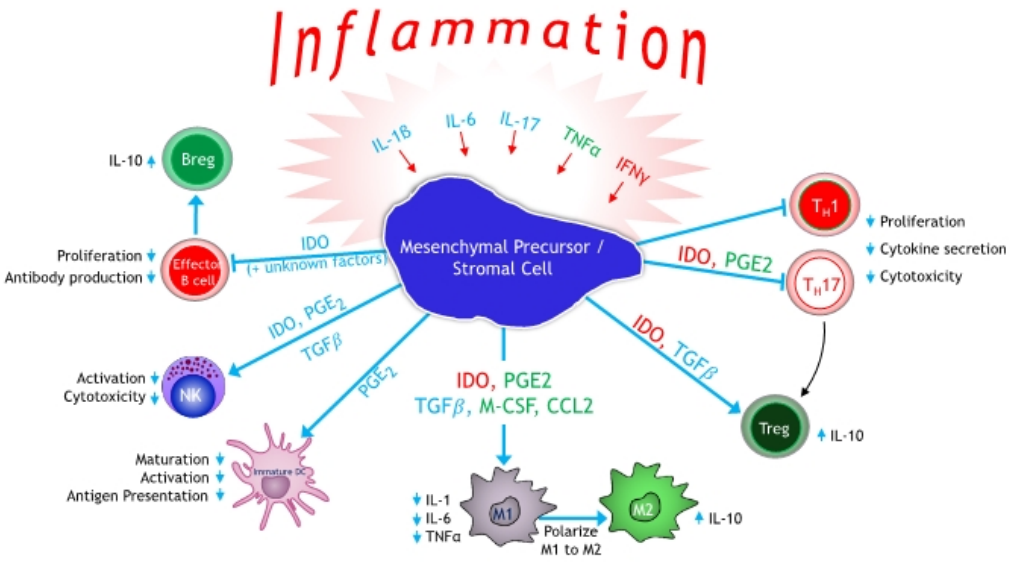
Our Mission

Mesoblast is committed to bringing to market innovative cellular medicines to treat serious and life-threatening illnesses



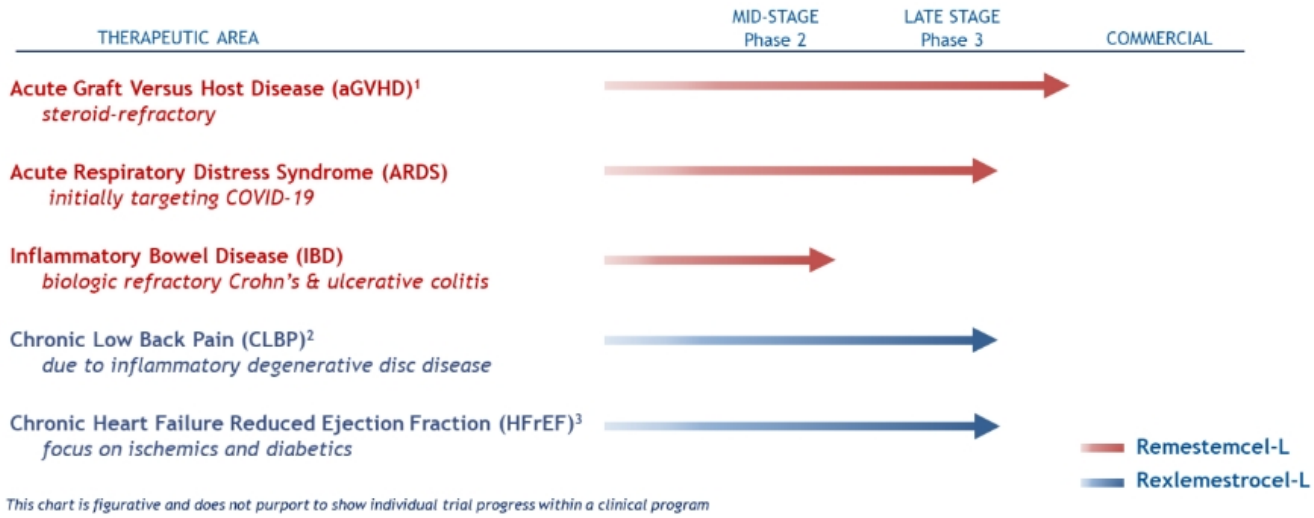
Platform Technology – Mechanism of Action

Our mesenchymal precursor/stromal cells respond to and are activated by multiple inflammatory cytokines through surface receptors, resulting in orchestration of an anti-inflammatory cascade



Source: data on file

Late-Stage Clinical Pipeline



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

1. 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). Mesoblast has the right to use safety and efficacy data generated by JCR to support its development and commercialization plans for remestemcel-L in the US and other major healthcare markets, including for GVHD and HIE
2. Grünenthal has an exclusive license to develop and commercialize rexlemestrocel-L for chronic low back pain in Europe and Latin America/Caribbean
3. Tasly Pharmaceuticals has exclusive rights for rexlemestrocel-L for the treatment or prevention of chronic heart failure in China

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Manufacturing Remestemcel-L

Financial Results

for the Period Ended March 31, 2022

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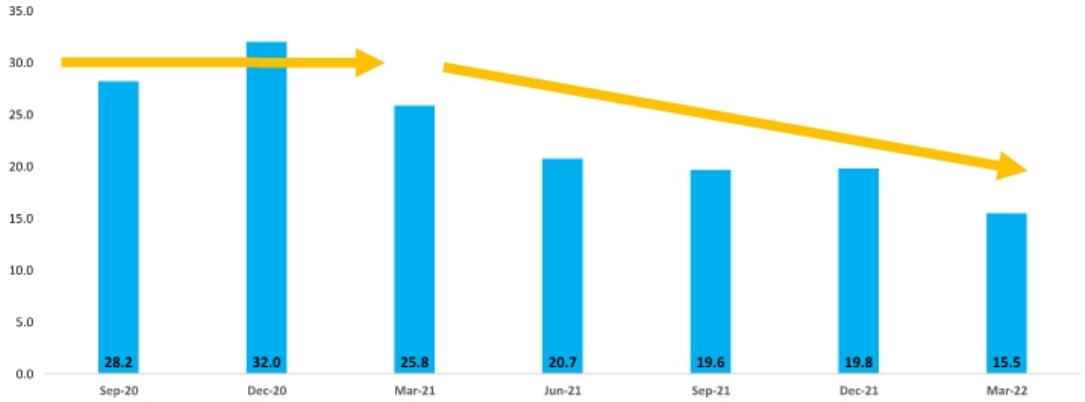
Financial Highlights

- Revenues in the quarter increased by 5% on the comparative quarter to US$2.0 million and by 46% for the nine-month period ended March 31, 2022, to US$8.0 million
- Net cash usage reported for operating activities in the quarter was reduced by 40%, or US$10.3 million, to US$15.5 million compared with US$25.8 million in the comparative quarter last year[1]
- For the quarter, net cash usage reported for operating activities excluding inventory for the planned remestemcel-L product launch, was reduced by 50% to US$11.2 million from US$22.2 million in the comparative quarter
- For the nine-month period ended March 31, 2022, net cash usage reported for operating activities was reduced by 36%, or US$31.2 million, to US$54.8 million compared with US$86.0 million in the comparative period last year, and by 40% excluding inventory for the planned remestemcel-L product launch
- Cash on hand at the end of the quarter was US$76.8 million, with up to an additional US$40 million available to be drawn down from existing financing facilities subject to certain milestones

1. Accounting policy change resulted in a $1.4 million benefit in the Mar 22 quarter.

Reported Quarterly Net Operating Cash Burn has been significantly reduced

US$m



- Reported quarterly net operating cash burn has been reduced over the last 5 quarters.

Accounting policy change resulted in a $1.4 million benefit in the Mar 22 quarter.

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Reduction in R&D Spend; Steady Investment in Manufacturing

P&L for the 3 months ended (US$m)	Mar 31, 2022 (3rd Qtr FY2022)	Mar 31, 2021 (3rd Qtr FY2021)
Total Revenue	**2.0**	**1.9**
Research and development	(8.2)	(12.4)
Manufacturing	(5.6)	(7.3)
Management & administration	(7.6)	(8.1)
Revaluation of contingent consideration	0.7	1.5
Revaluation of warrant liability	0.9	-
Other operating income & expenses	0.4	1.0
Finance costs	(3.9)	(3.2)
Loss before tax	**(21.3)**	**(26.6)**
Income tax benefit	-	0.1
Loss after tax	**(21.3)**	**(26.5)**

- **Decreased R&D Spend:**
  34% reduction ($4.2m) predominantly due to reduced spend on clinical trial activities.

- **Steady Investment in Manufacturing:**
  Continued build of pre-launch inventory of remestemcel-L to support the launch of SR-aGVHD.

  On FDA approval, remestemcel-L inventory will be recognized on the balance sheet, currently at US$29.7 million.

Figures have been rounded.

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Remestemcel-L

Acute Graft Versus Host Disease (aGVHD)

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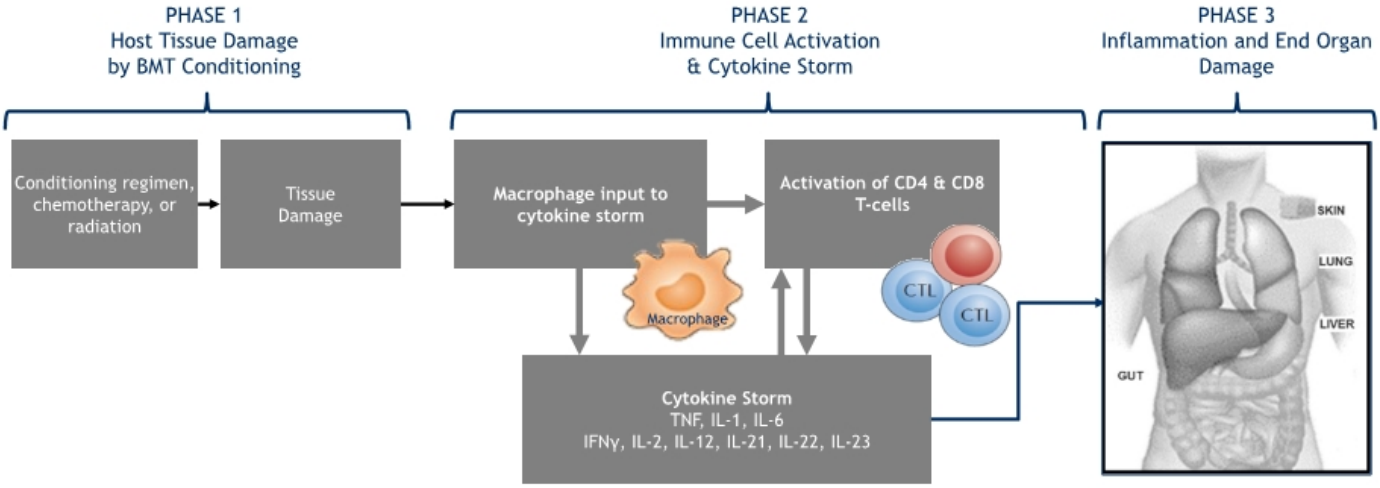
Acute Graft Versus Host Disease (aGVHD)

Serious and Fatal Complication of Allogeneic Bone Marrow Transplantation (BMT)



Modified from Blazar et al., Nature Reviews Immunology 12: 443 - 458

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Remestemcel-L: Steroid-Refractory Acute Graft Versus Host Disease

Significant Unmet Need with High Mortality

Treatment Options

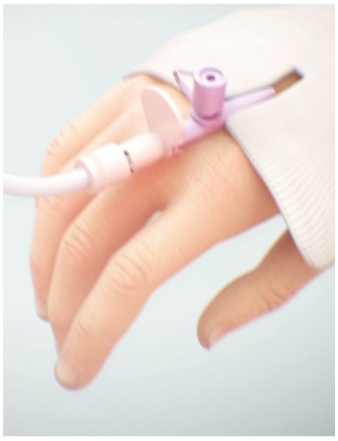
- Corticosteroids are first-line therapy for aGVHD
- There is only one approved treatment for disease refractory to steroids and no approved treatment in the US for children under 12 years old
- In Japan, Mesoblast's licensee has received the only product approval for SR-aGVHD in both children and adults

Burden of Illness

- Acute GVHD is a life-threatening complication that occurs in ~50% of patients receiving allogeneic bone marrow transplants (BMTs)[1]
- Acute GVHD primarily affects skin, GI tract, and liver
- Steroid-refractory aGVHD is associated with mortality rates as high as 90%[1,5] and significant extended hospital stay costs[2]

Market Opportunity

- More than 30,000 allogeneic BMTs performed globally (>20K US/EU) annually, ~20% pediatric[3,4]
- Approx. 1,500 allogeneic BMTs in children and adolescents in US[4]



1. Westin, J., Saliba, RM., Lima, M. (2011) Steroid-refractory acute GVHD: predictors and outcomes. Advances in Hematology. 2. Anthem-HealthCore/Mesoblast claims analysis (2016). Data on file 3. Niederwieser D, Baldomero H, Szer J. (2016) Hematopoietic stem cell transplantation activity worldwide in 2012 and a SWOT analysis of the Worldwide Network for Blood and Marrow Transplantation Group including the global survey. 4. HRSA Transplant Activity Report, CIBMTR, 2019 5. Axt L, Naumann A, Toennies J (2019) Retrospective single center analysis of outcome, risk factors and therapy in steroid refractory graft-versus-host disease after allogeneic hematopoietic cell transplantion. Bone Marrow Transplantation.

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Remestemcel-L: Prior Clinical Data in Children with SR-aGVHD

Consistent Efficacy and Safety Outcomes in a Total of 309 Children from Three Studies

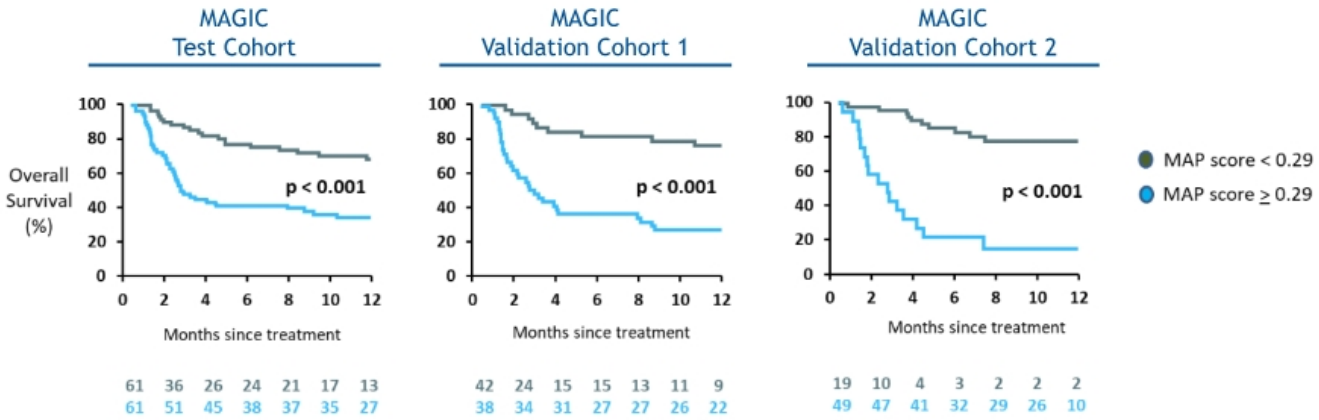
- Remestemcel-L was used as first-line therapy in a randomized controlled Phase 3 trial of 260 patients, with SR-aGVHD, including 27 children
- Remestemcel-L was used as salvage therapy in an expanded access program in 241 children with SR-aGVHD, 80% of whom had Grade C/D disease, and failed institutional standard of care
- Remestemcel-L was used as first-line therapy in Mesoblast's open-label Phase 3 trial in 54 children with SR-aGVHD, 89% of whom had Grade C/D disease

		Protocol 280 (pediatric)		EAP 275	Study 001
	MAGIC[1] N=30[2]	Placebo N=13	Remestemcel-L N=14	Remestemcel-L N=241	Remestemcel-L N=54[3]
Day 28 Overall Response	43%	38%	64%	65%	69%
Day 100 Survival	57%	54%	79%	66%	74%

1. Mount Sinai Acute GVHD International Consortium (MAGIC) - a group of ten BMT centers throughout the US and Europe whose purpose is to conduct ground-breaking clinical trials in GVHD, including developing informative biorepositories that assist in developing treatments that can guide GVHD therapy; 2. Two subjects in the MAGIC cohort had follow-up <100 days; these subjects are excluded from the respective survival analyses; 3.GVHD001 had 55 randomized patients, however one patient dropped out before receiving any dose of remestemcel-L

Identifying Acute GVHD Patients at High Risk of Non-Response to Treatment and Death

MAGIC Algorithm Probability Biomarker Score (MBS, MAP) > 0.29 is a Validated Threshold



Major-Monfried H, et al. MAGIC biomarkers predict long-term outcomes for steroid-resistant acute GVHD. Blood 2018; 131 (25): 2846-2855

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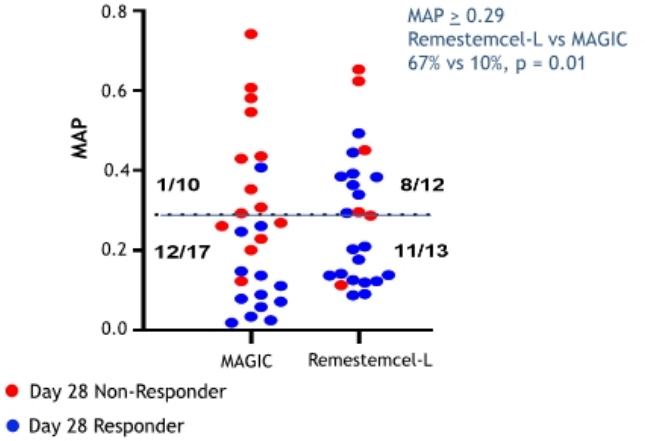
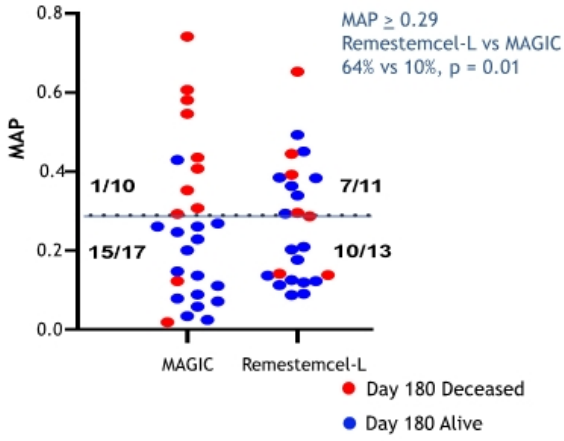
Remestemcel-L Treatment Outcomes

Significantly Greater Day 28 Overall Responses and Day 180 Survival in Steroid-Refractory Patients with Baseline MAP ≥ 0.29

Response by Baseline MAP



Survival by Baseline MAP



Kasikis S et al. Bone Marrow Transplantation 2021; 56:2869-2870.

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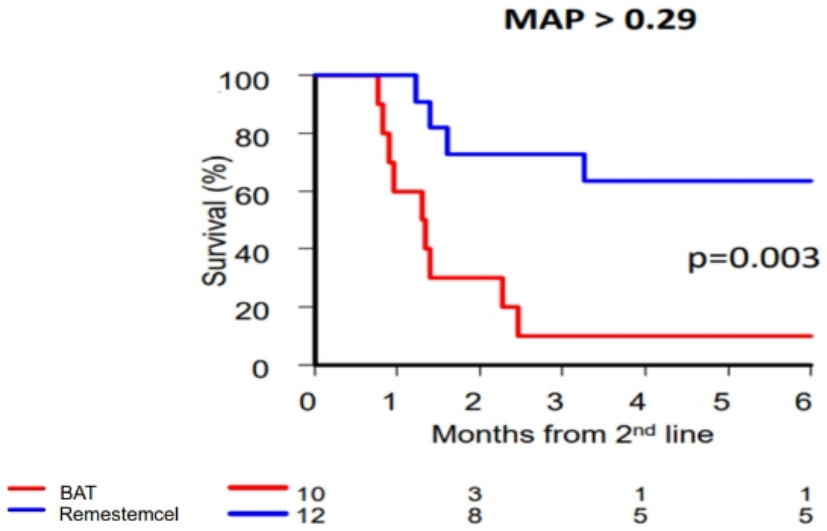
Remestemcel-L Treatment Outcomes

Significantly Greater Survival in Steroid-Refractory Patients with Baseline MAP ≥ 0.29

Kaplan-Meier Estimates of 6-month Overall Survival for the Two Patient Cohorts by Baseline MAP



Abbreviations:
MAP: MAGIC algorithm probability;
BAT: best available therapy.

Kasikis S et al. Bone Marrow Transplantation 2021; 56:2869-2870.

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Remestemcel-L: Plan for BLA Resubmission

- Mesoblast believes that the proposed potency assay measuring remestemcel-L's in vitro anti-inflammatory and immunomodulatory activity helps establish a clear understanding of remestemcel-L's mechanism of action in SR-aGVHD, and demonstrates relevance to the *in vivo* clinical effect of the product in the 54-patient Phase 3 trial in children with SR-aGVHD
- Strongest correlation between potency assay and survival seen in those patients at highest mortality risk as measured by clinical severity or high biomarker levels of inflammation
- Additionally, Mesoblast has now generated data from the expanded access program (EAP 275) of 241 children which confirm the ability of the in-vitro potency assay to measure product activity relevant to survival outcomes
- Our GMP contractor is now well resourced allowing final testing of product inventory for the BLA resubmission
- In preparation for the expected FDA review, Mesoblast last week completed a successful mock pre-approval inspection of its GMP manufacturing facility and process comprising both on-site and virtual inspections by external auditors
- Mesoblast will provide these new data to FDA and address all chemistry, manufacturing and controls (CMC) outstanding items as required for the planned BLA resubmission in the coming quarter. If the resubmission is accepted, CBER will consider the adequacy of the clinical data in the context of the related CMC issues

Remestemcel-L

Acute Respiratory Distress Syndrome (ARDS) due to COVID-19

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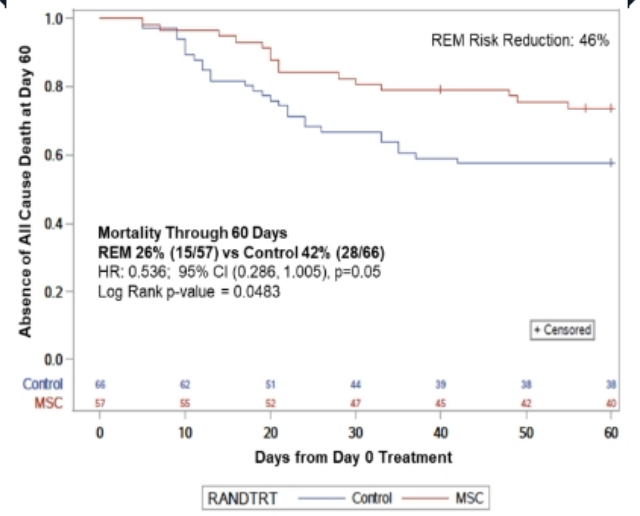
Remestemcel-L: Acute Respiratory Distress Syndrome (ARDS)

Clinical Need for Effective Treatment Remains High

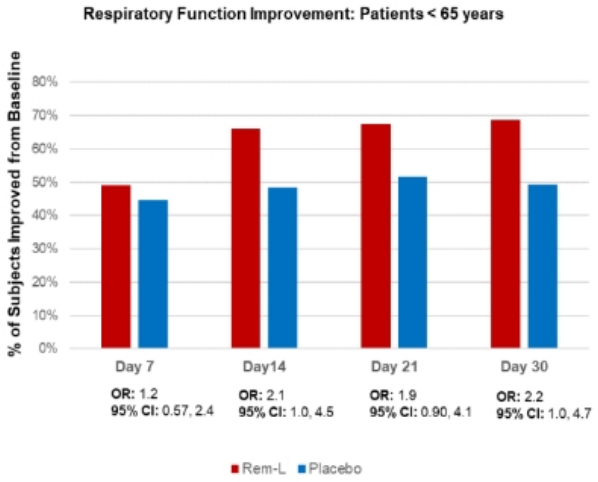
- ARDS is caused by cytokine storm in lungs of patients infected with COVID-19 or other respiratory pathogens
- New COVID-19 variants are emerging globally with high infection rates
- ARDS remains a major cause of mortality for COVID-19 patients who are immunocompromised, unvaccinated, or with comorbidities, as well as those with seasonal influenza and other pathogens
- Remestemcel-L has the potential to tame the cytokine storm in ARDS and may offer a life-saving treatment for high-risk patients
- Mesoblast intends to move forward with the pivotal trial for EUA, with reference to the aGVHD BLA for product potency assay in place prior to trial commencement

Greatest Mortality Reduction & Improved ARDS Severity* seen in Remestemcel-L Treated Patients < 65 years

Modified Intent to Treat (mITT) Patients < 65 years old (n=123) Remestemcel-L vs Control



Treated Patients (mITT) < 65 years old (n=123) Remestemcel-L vs Control



* Measured as resolution and/or improvement of ARDS as defined by the Berlin criteria at Days 7, 14, 21, and 30 post-randomizations

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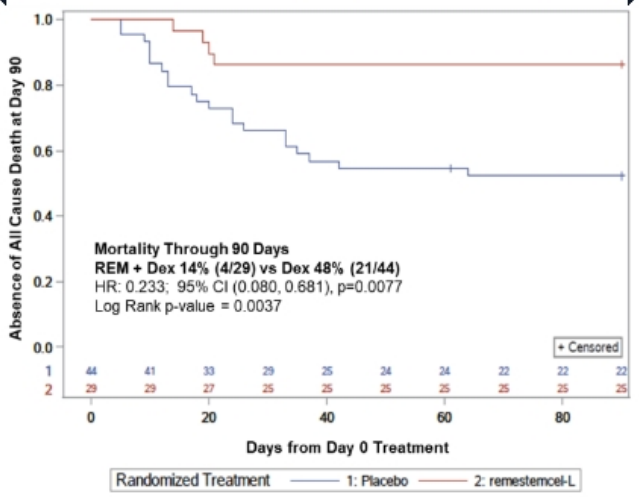
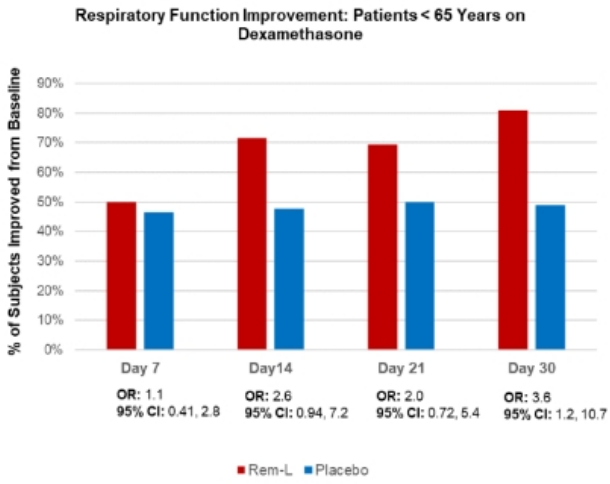
Remestemcel-L Plus Dexamethasone Shows Synergy in Mortality Reduction and Improvement in ARDS Severity* in Exploratory Population < 65 years old

Treated Patients (mITT) < 65 years old on Dexamethasone (n=73) through 90-Days



Treated Patients (mITT) < 65 years old on Dexamethasone (n=73)



* Measured as resolution and/or improvement of ARDS as defined by the Berlin criteria at Days 7, 14, 21, and 30 post-randomizations

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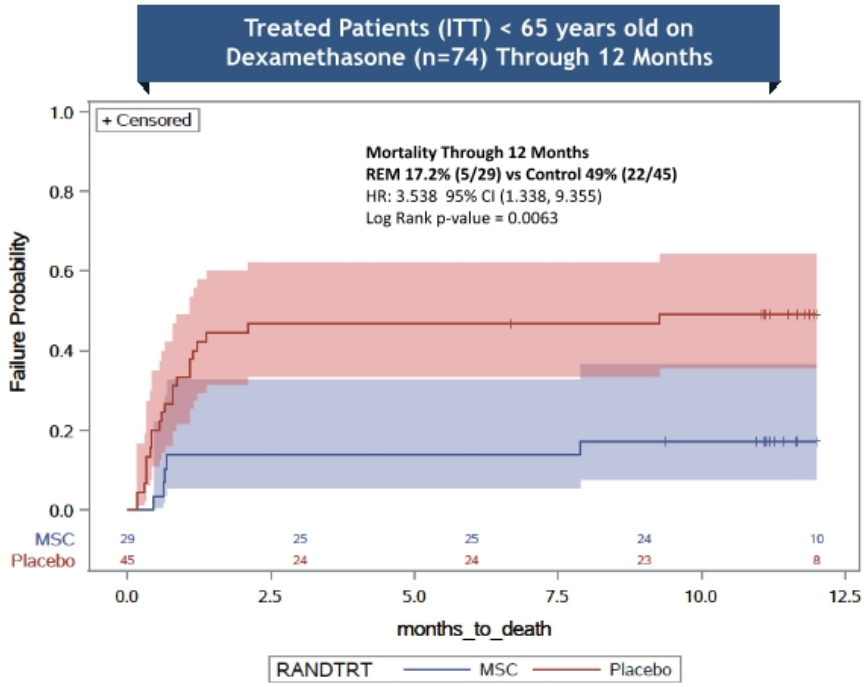
Remestemcel-L Plus Dexamethasone Shows Synergy in COVID ARDS Mortality Reduction Over 12 Months in Exploratory Population < 65 years old



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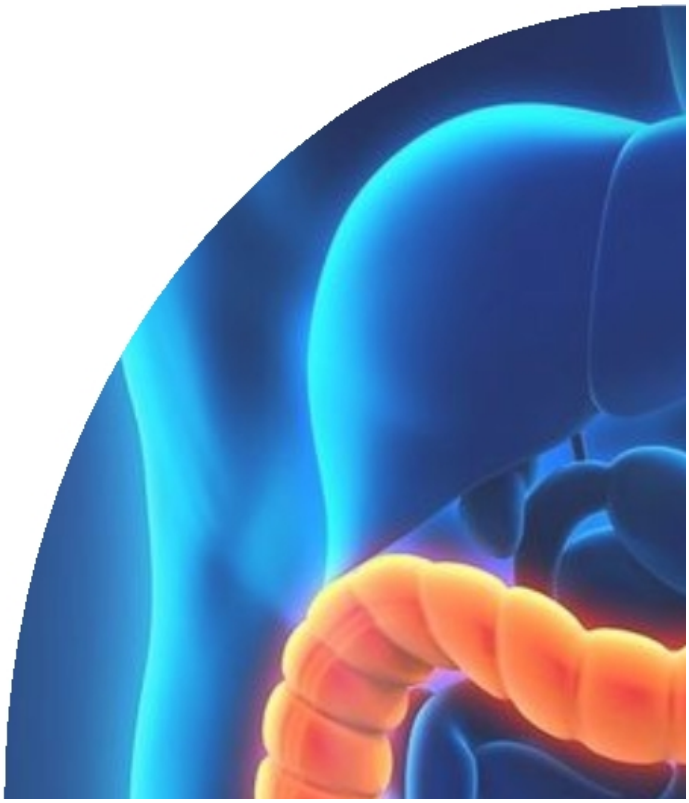
Remestemcel-L: Regulatory Pathway to Potential EUA for COVID-19 ARDS

- The FDA has advised Mesoblast that an additional clinical study in COVID ARDS, if statistically positive, could provide a dataset in conjunction with the recently completed 222 patient clinical study that might be sufficient to support an emergency use authorization (EUA)
- FDA provided guidance that the existing COVID ARDS Investigational New Drug (IND) file and future submissions for remestemcel-L in this indication may continue to cross-reference manufacturing and potency assay information in BLA for pediatric SR-aGVHD
- Mesoblast is working together with investigators from a clinical trial network focused on acute lung injury at over 40 sites across the United States affiliated with Vanderbilt University Medical Center to design and implement a pivotal trial of remestemcel-L to reduce mortality in high-risk patients with ARDS

Remestemcel-L

Inflammatory Bowel Disease

Ulcerative Colitis & Crohn's Disease



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Remestemcel-L: Inflammatory Bowel Disease

Potential Localized Treatment for Ulcerative Colitis & Crohn's Colitis Refractory to Biologics - High Unmet Need

Treatment Options

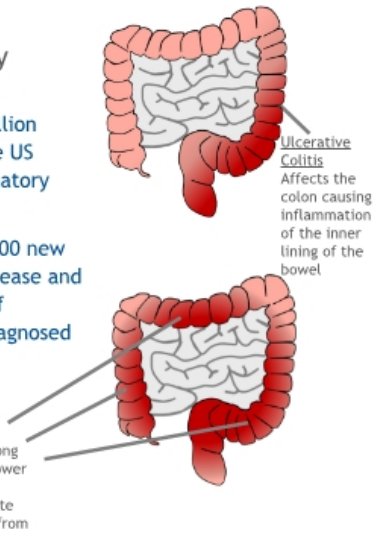
- Despite recent advances, approximately 30% of patients are primarily unresponsive to anti-TNFα agents
- Among responders, up to 10% will lose their response to the drug every year[1,2]

Burden of Illness

- Up to 80% of patients with medically-refractory Crohn's disease and 20% of patients with medically-refractory ulcerative colitis eventually require surgical treatment of their disease[1,2]
- Which can have a devastating impact on quality of life

Market Opportunity

- More than three million people (1.3%) in the US alone have inflammatory bowel disease[1]
- Approximately 33,000 new cases of Crohn's disease and 38,000 new cases of ulcerative colitis diagnosed every year[3-5]



1. Crohn's and Colitis Foundation; 2. Lightner AL. Surgery for Inflammatory Bowel Disease in the ERA of Biologics. J Gastrointest Surg. 2020 Vol 24: 1430-1435; 3. CDC Facts and Figures 2015; 4. Globaldata Pharmapoint 2018; 5. Dahlhamer JM, MMWR Morb Mortal Wkly Rep. 2016;65(42):1166-1169

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Remestemcel-L: Ulcerative Colitis & Crohn's Colitis

Results of First Patient Cohort from Randomized Controlled Study Published in the Journal of Crohn's and Colitis

- The immunomodulatory effects of remestemcel-L on GI inflammation is being further evaluated in a randomized, controlled study of remestemcel-L by direct endoscopic delivery to areas of inflammation in patients with medically refractory ulcerative colitis or Crohn's colitis
- A single local delivery of remestemcel-L by colonoscopy resulted in rapid mucosal healing and disease remission in these refractory patients at high risk of progression to surgery
- The study at Cleveland Clinic will randomize up to 48 patients with medically refractory ulcerative colitis or Crohn's colitis in a 2:1 fashion to receive a single intervention with remestemcel-L or placebo.
- Medically refractory ulcerative colitis and Crohn's colitis patients are defined as having active disease for at least 6 months and having lost response to at least one monoclonal antibody (anti-TNF or anti-integrin)

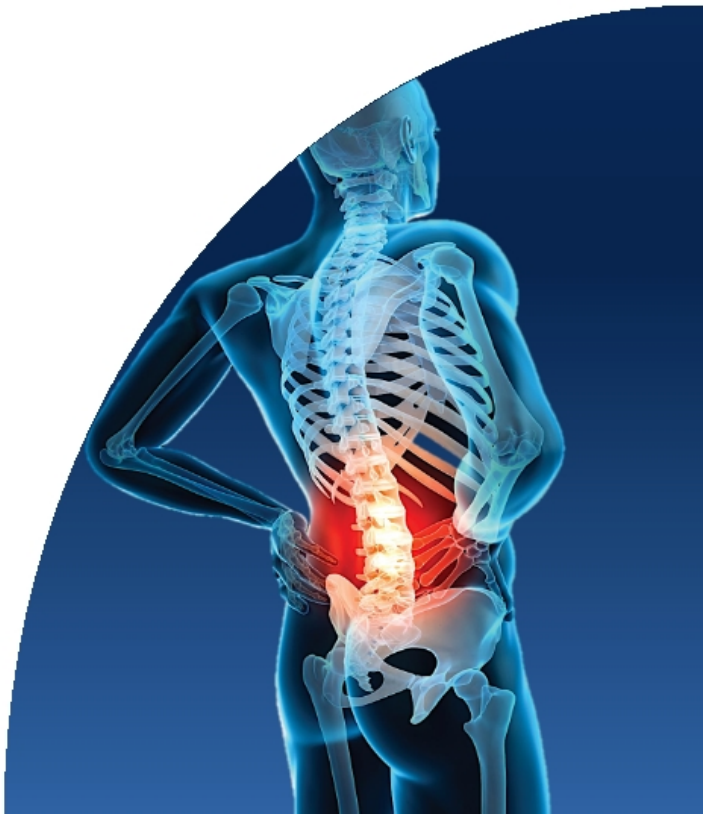
Remestemcel-L: Ulcerative Colitis & Crohn's Colitis

Results of First Patient Cohort from Randomized Controlled Study Published in the Journal of Crohn's and Colitis

- Key results of the interim analysis performed in the first 12 enrolled patients were as follows:
  - All UC patients treated with remestemcel-L had improved clinical and endoscopy scores within 2 weeks, as defined by the Mayo clinical score and Mayo endoscopic severity (MES) score, and all achieved clinical and endoscopic remission by 2 weeks
  - All UC patients were extremely satisfied or satisfied with remestemcel-L treatment at 3 months, based on the inflammatory bowel disease patient reported treatment impact (IBD-PRTI), and response was described as excellent or good in all patients
  - All Crohn's colitis patients treated with remestemcel-L showed treatment remissions or responses by three months, as measured by the Simple Endoscopy Score for Crohn's Disease (SES-CD) (mean score 17 at baseline decreased to 5 at 3 months)
  - Remestemcel-L treatment resulted in reduction of fecal calprotectin, a validated biomarker of disease activity,10 from mean of 231 at baseline to 67 at 3 months, indicative of remission
  - In controls with UC and Crohn's colitis over 3 months, endoscopy scores increased, fecal calprotectin levels increased from a mean of 330 to 505, and clinical responses were described as poor or unchanged

Rexlemestrocel-L

Chronic Low Back Pain (CLBP) due to Degenerative Disc Disease (DDD)



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Rexlemestrocel-L

A New Paradigm for Treatment of Chronic Low Back Pain due to Degenerative Disc Disease

Burden of Illness

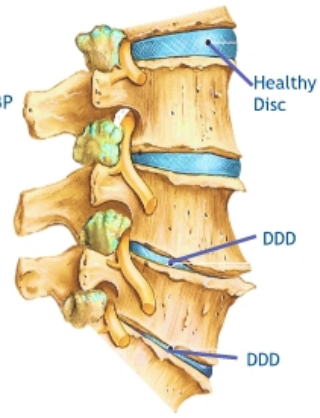
- Back pain causes more disability than any other condition[1]
- Inflicts substantial direct and indirect costs on the healthcare system,[1] including excessive use of opioids in this patient population

Treatment Options

- Minimal treatment options for patients with chronic low back pain (CLBP) who fail conservative therapy include opioids and surgery
- 50% of opioid prescriptions are for CLBP[3]
- Durable improvement in pain has potential to reduce opioid use and prevent surgical intervention

Market Opportunity

- Over 7m patients are estimated to suffer from CLBP due to degenerative disc disease (DDD) in each of the U.S. and E.U.5 [3,4,5]



1. Williams, J., NG, Nawi, Pelzter, K. (2015) Risk factors and disability associated with low back pain in older adults in low-and middle-income countries. Results from the WHO Study on global ageing and adult health (SAGE). PloS One. 2015; 10(6): e0127880., 2. Simon, J., McAuliffe, M., Shamim, F. (2015) Discogenic Low Back Pain. Phys Med Rehabil Clin N Am 25 (2014) 305-317., 3.Decision Resources: Chronic Pain December 2015., 4. LEK & NCI opinion leader interviews, and secondary analysis., 5. Navigant: Commercial Assessment for a Proprietary Cell-Based Therapy for DDD in the U.S. and the EU3 - August 2014., 6. HealthCare Utilization and Cost of Discogenic Lower Back Pain in the US - Anthem/HealthCore.

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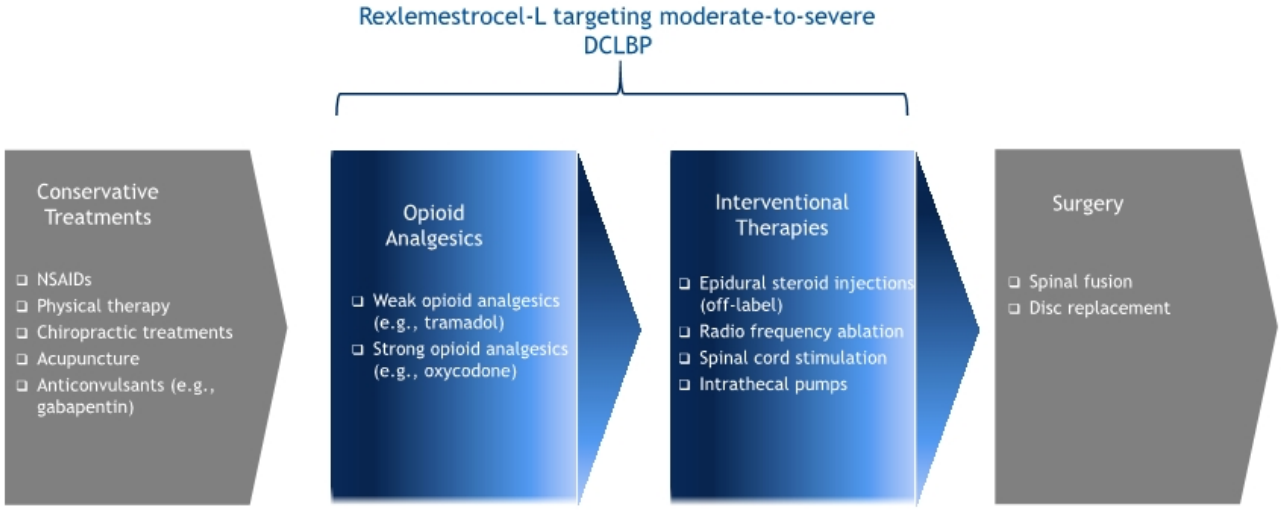
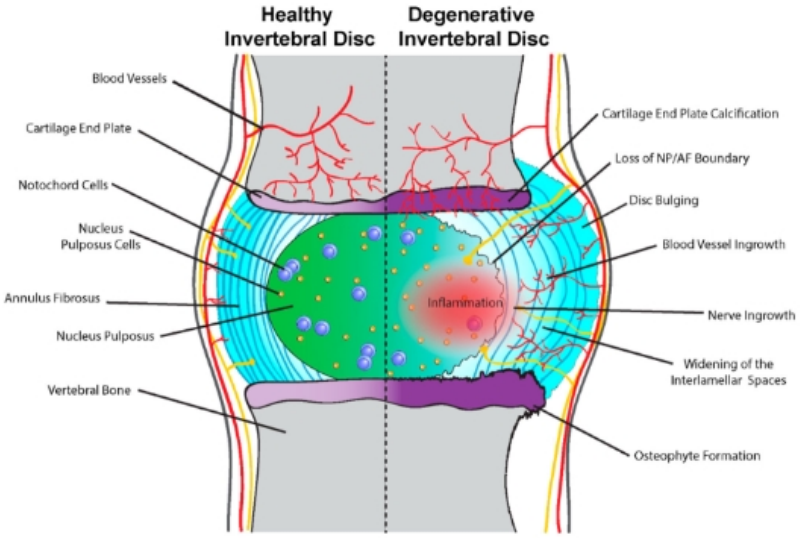
The Patient Treatment Journey

Rexlemestrocel-L Potential for First-Line CLBP associated with DDD, Refractory to Conservative Treatment



Chronic Low Back Pain

Inflammation is at the Core of Degenerative Disc Disease



McCann MR and Seguin CA. Notochord Cells in Intervertebral Disc Development and Degeneration. J. Dev. Biol. 2016, 4(1), 3

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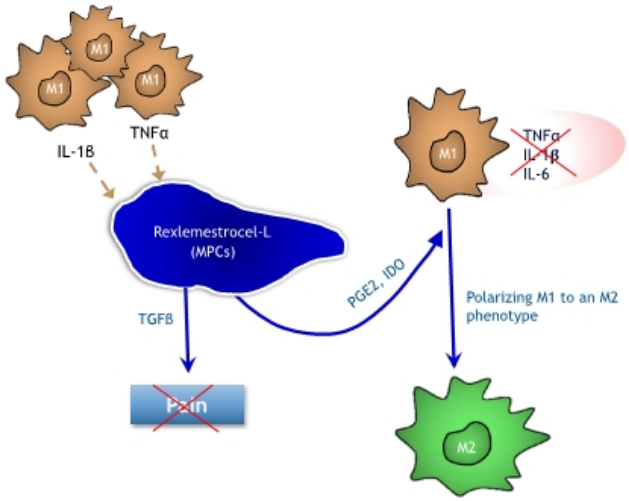
Technology Platform – Mesenchymal Precursor Cells (MPC)

Potential Mechanisms of Action in Treating Inflammatory Disc Disease

Rexlemestrocel-L

Mesenchymal precursor cells (MPC) beneficially act in the inflamed disc:

1. Reduce neurite ingrowth
2. Reduce neuropathic pain
3. Increase structural integrity of annulus
4. Increase proteoglycans in nucleus



M1=pro-inflammatory macrophage; IL-1B=interleukin-1 beta (pro-inflammatory cytokine); TNFα=Tumour Necrosis Factor alpha (pro-inflammatory cytokine); M2=anti-inflammatory macrophage

Phase 3 Trial Outcomes – Rexlemestrocel-L for Chronic Low Back Pain

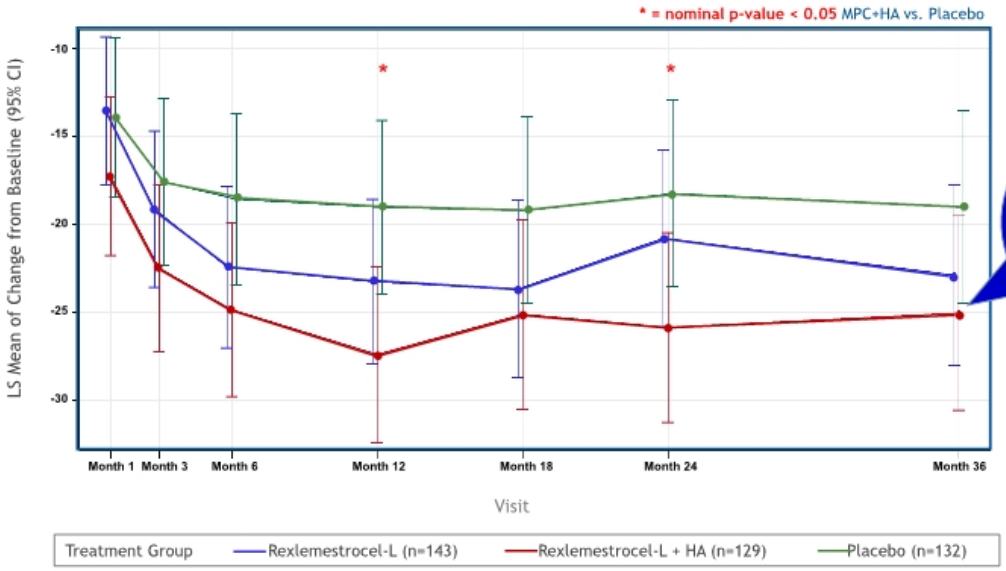
Single Injection of Rexlemestrocel-L + HA Results in >Three Years of Pain Reduction

Positive results from a single injection of MPC + Hyaluronic Acid (HA) carrier include:

- No appreciable differences in the safety profile of subjects treated with Rexlemestrocel-L, Rexlemestrocel-L+HA or saline control
- Achievement of significant and durable reductions in CLBP (mean change from baseline in back pain intensity) through 36 months across the entire evaluable study population (n=404) compared with saline controls
- Greatest pain reduction was observed in the pre-specified population of subjects with CLBP duration shorter than the baseline study median of 68 months (n=202) with significantly greater reduction (nominal p-value < 0.05) at all time points analyzed over 36 months compared with saline controls
- Significantly greater pain reduction in the pre-specified patient subset of opioid users (n=168) at all time-points compared with saline controls and by 36 months there was a significant increase in the proportion of patients that came off opioids altogether

Phase 3 Trial: Outcome

LS Mean Change in Low Back Pain from Baseline - Entire Study (n=404)



All Subjects

Rexlemestrocel-L+HA
Demonstrated significant reductions in pain at 12 and 24 months

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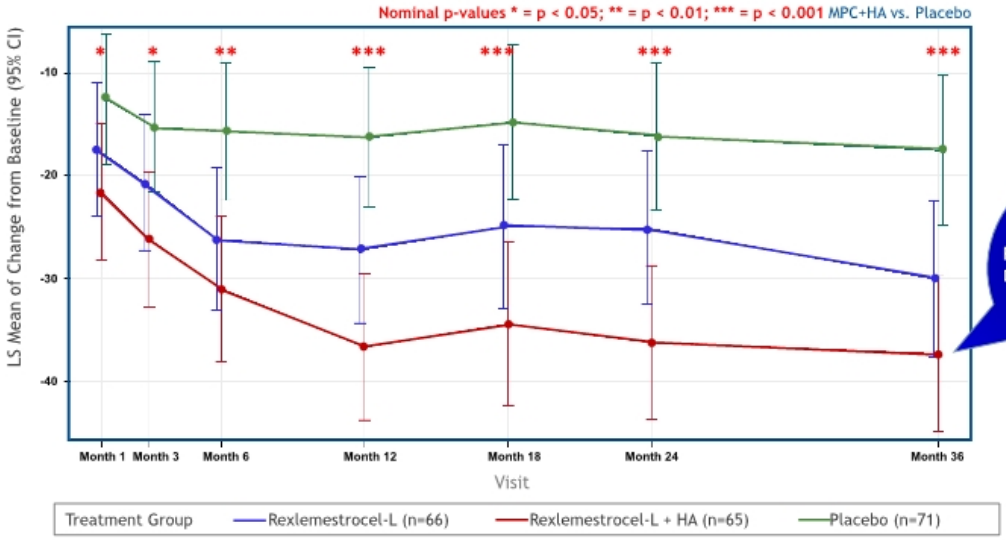
Phase 3 Trial: Outcome

LS Mean VAS Change in Low Back Pain from Baseline - Duration CLBP < 68 Month Median Baseline Duration (n=202)



Duration < Median

Rexlemestrocel-L +HA Demonstrated significant reductions in pain over 36-months

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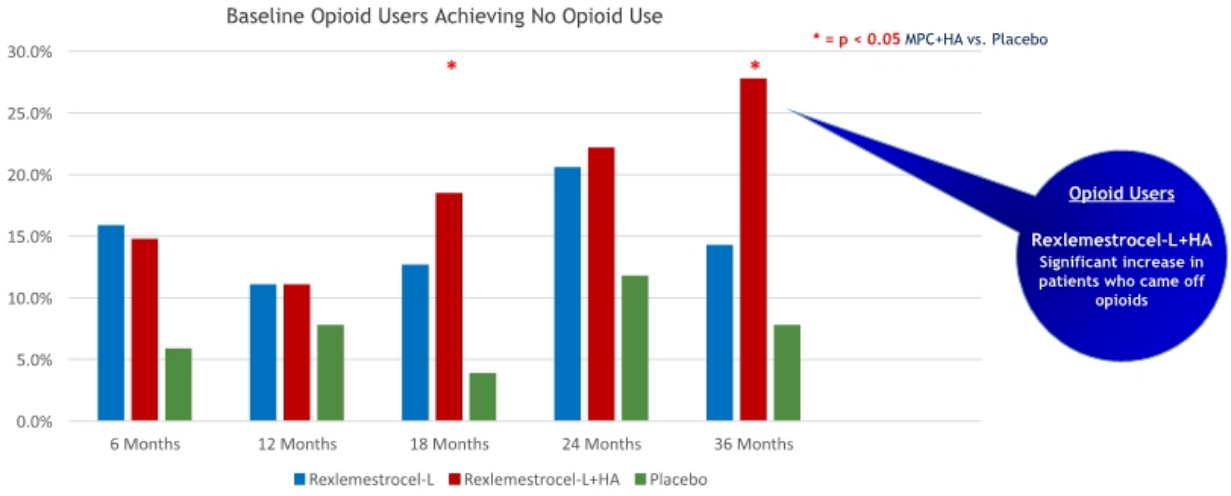
Phase 3 Trial: Outcome

Rexlemestrocel-L + HA Increased the Proportion of Patients with Baseline Opioid Use Who Were Not Taking an Opioid at 36 Months



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Next Steps for Rexlemestrocel-L in Chronic Low Back Pain

- FDA Office of Tissues and Advanced Therapies (OTAT) agreed with Mesoblast's proposal for mean pain reduction at 12 months to serve as the primary endpoint of the next trial, with mean functional improvement and reduction in opioid use as secondary endpoints
- A key objective is to demonstrate durable reduction in pain and position rexlemestrocel-L as a potential opioid-sparing agent
- The planned upcoming US trial will include at least 20% of subjects from the EU to support submissions to both FDA and EMA
- Active discussions ongoing with key investigators and advisors on final protocol design

Rexlemestrocel-L

Chronic Heart Failure with Reduced Ejection Fraction (HFrEF)

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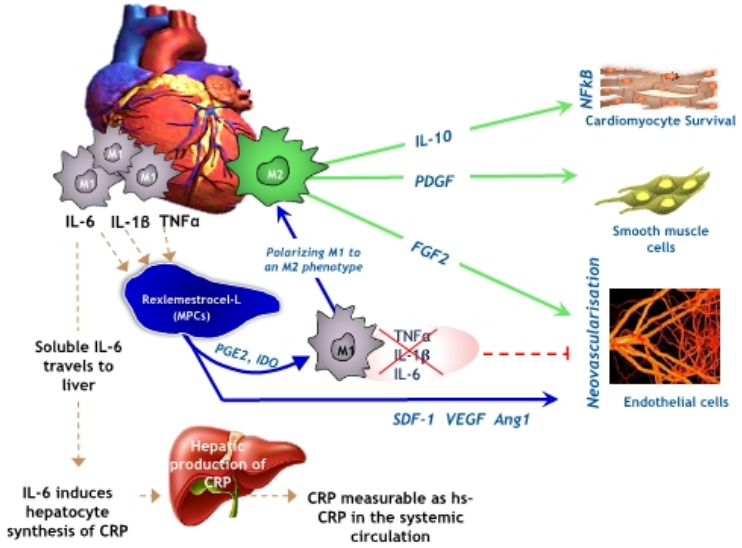
Rexlemestrocel-L: Proposed Mechanism of Action

Intra-Cardiac Administration in Treatment of both Heart Failure & Large Vessel Atherosclerosis

Mesenchymal precursor cells (MPC) beneficially act the heart and the systemic vasculature:

1. Reduce cardiac / systemic inflammation
2. Reversal of endothelial dysfunction
3. Induce microvascular networks within viable heart muscle
4. Reduce heart muscle death

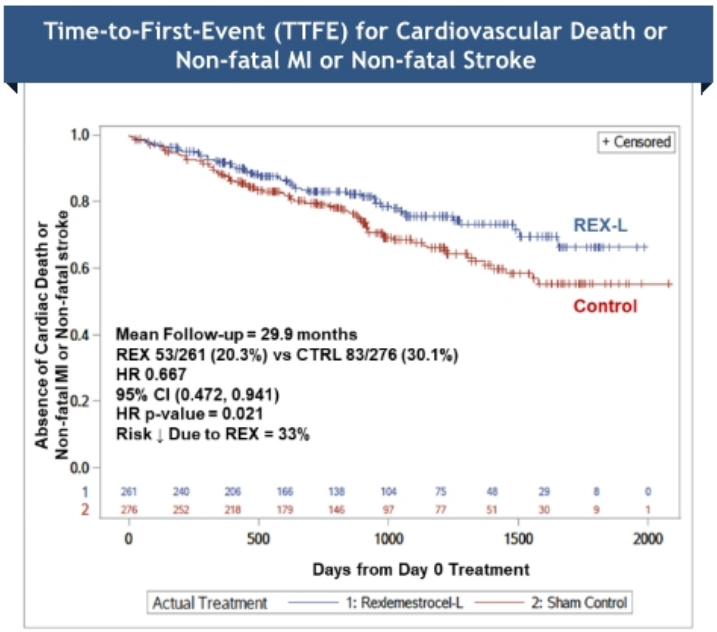


M1=pro-inflammatory macrophage; IL-6=interleukin 6 (pro-inflammatory cytokine); IL-1ß=interleukin-1 beta (pro-inflammatory cytokine); TNFα=Tumour Necrosis Factor alpha (pro-inflammatory cytokine); IL-1-=interleukin 10 (anti-inflammatory cytokine); M2=anti-inflammatory macrophage

Modified from Borow KM, Yaroshinsky A, Greenberg B, Perin E. Phase 3 DREAM-HF Trial of Mesenchymal Precursor Cells in Chronic Heart Failure: A Review of Biological Plausibility and Implementation of Flexible Clinical Trial Design. Circ Res. 2019;125:265-281

DREAM-HF Phase 3 Trial in HFrEF

Rexlemestrocel-L Reduced Incidence of 3-Point Composite MACE - CV Death, MI or Stroke - Compared to Controls Across All 537 Treated Patients



MACE=Major Adverse Cardiovascular Event; TTFE=Time To First Event; MI=Myocardial Infarction (Heart Attack)

Kaplan-Meier log rank statistics

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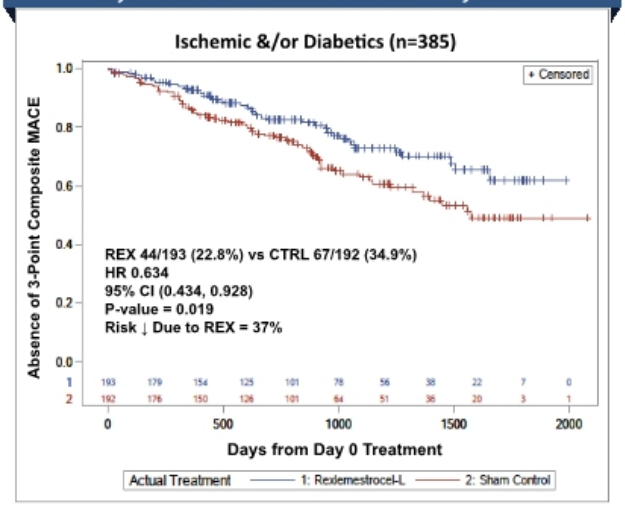
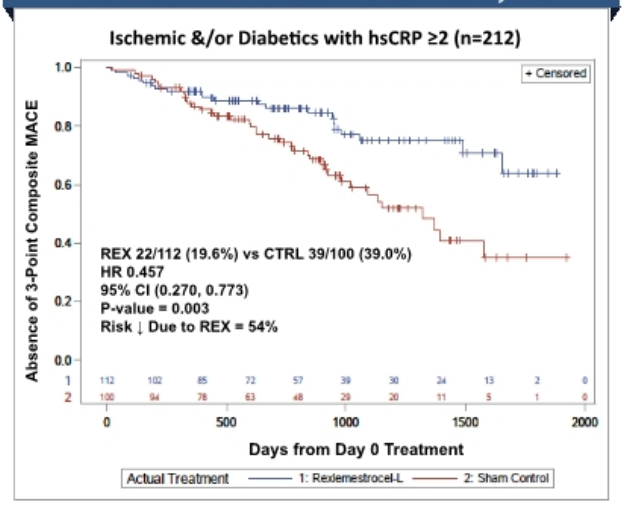
DREAM-HF Phase 3 Trial in HFrEF

3-Point Composite MACE, High-Risk Patients (Myocardial Ischemia &/or Diabetes), and Inflammation

Rexlemestrocel-L Reduced Risk of 3-Point TTFE Composite IMM MACE in High-Risk Patients with Myocardial Ischemia &/or Diabetes by 37%



In Patients with Myocardial Ischemia and/or Diabetes with hsCRP≥2 mg/L Rexlemestrocel-L Reduced Risk of TTFE for 3-Point MACE by 54%



Kaplan-Meier log rank statistics

MACE=Major Adverse Cardiovascular Event; TTFE=Time To First Event; IMM=Irreversible Morbidity or Mortality; hs-CRP=High-Sensitivity C-Reactive Protein (a measure of systemic inflammation)

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Investigational Agents Evaluated for Cardiovascular Risk Reduction Using 3-Point IMM MACE*

Comparison With Rexlemestrocel-L in Patients With Myocardial Ischemia &/or Diabetes

Medication	Drug Class	Clinical Trial	Hazard Ratio	Risk Reduction	95% CI	P-value	# Randomized Patients
Liraglutide	GLP-1 Receptor Agonist (RA)	LEADER	0.87	13%	0.78, 0.97	0.01	9,340
		Heart Failure Sub-group	0.94	6%	0.72, 1.21	-------	1,305
Dulaglutide	GLP-1 Receptor Agonist (RA)	REWIND	0.88	12%	0.79, 0.99	0.03	9,901
Empagliflozin	SGLT-2 Inhibitor	EMPA-REG	0.86	14%	0.74, 0.99	0.04	7,020
Canagliflozin	SGLT-2 Inhibitor	CANVAS + CANVAS-R	0.86	14%	0.75, 0.97	0.02	10,142
		Heart Failure Sub-group	0.80	20%	0.61, 1.05	-------	1,461
Dapagliflozin	SGLT-2 Inhibitor	DECLARE Timi 58	0.93	7%	0.84, 1.03	-------	17,160
		Heart Failure Sub-group	1.01	0%	0.81, 1.27	-------	1,724
Ertugliflozin	SGLT-2 Inhibitor	VERTIS CV	0.99	1%	0.88, 1.12	-------	8,246
Rexlemestrocel-L	**Mesenchymal Precursor Cells**	**DREAM HF Ischemics &/or Diabetics**	**0.63**	**37%**	**0.43, 0.93**	**0.019**	**385**
		Ischemics &/or Diabetics With Baseline hsCRP≥2mg/L	**0.46**	**54%**	**0.27, 0.77**	**0.003**	**212**

* TTFE Composite for non-fatal MI, or non-fatal stroke, or cardiovascular death

Wang CCL, et al. Circulation; 2019; 139: 1741-1743; McGuire DK, et al. JAMA Cardiology 2021; 6: 148-158

Rexlemestrocel-L: Conclusions & Key Next Steps in HFrEF

1. Transendocardial delivery of 150 million allogeneic MPCs (rexlemestrocel-L) was safe and did not elicit any clinically meaningful immune-related responses

2. Over a mean follow-up of 30 months, a single rexlemestrocel-L dose on top of maximal standard of care significantly reduced:

   - Composite of cardiovascular death or non-fatal MI or non-fatal stroke in all 537 patients
   - A hierarchical analysis of pre-specified risk stratification showed greatest benefit in patients with myocardial ischemia and/or diabetes (72% of total treated population)
   - In controls (treated with maximal current therapies for heart failure), the presence of myocardial ischemia and/or diabetes resulted in 1.9-fold greater risk of 3-Point MACE versus other control patients with heart failure
   - Rexlemestrocel-L reduced 3-Point MACE in myocardial ischemics and/or diabetics by 37%
   - Greatest benefit in patients with elevated CRP at baseline with reduction in 3-Point MACE of 54% (n = 212)

3. Mesoblast expects to receive guidance from FDA on a potential approval pathway following detailed review of the outcomes identified in high-risk HFrEF patients with diabetes and/or myocardial ischemia


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Thank You