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 April 2020

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 \square Form 40-F \square

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 \Box No \Box

INFORMATION CONTAINED ON THIS REPORT ON FORM 6-K On March 30, 2020, Mesoblast Limited filed with the Australian Securities Exchange a new release announcement, which is attached hereto as <u>Exhibit 99.1</u>, and is incorporated herein by reference.

On April 1, 2020, Mesoblast Limited filed with the Australian Securities Exchange a new release announcement, which is attached hereto as Exhibit 99.2, and is 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/ Charlie Harrison

Charlie Harrison Company Secretary

Dated: April 2, 2020

99.1

- Press release of Mesoblast Ltd, dated March 30, 2020. Press release of Mesoblast Ltd, dated April 1, 2020. 99.2
- Item



CLINICAL OUTCOMES OF MESOBLAST'S CELL THERAPY IN END-STAGE ISCHEMIC HEART FAILURE PRESENTED AT AMERICAN COLLEGE OF CARDIOLOGY VIRTUAL SCIENTIFIC SESSIONS

Melbourne, Australia; March 30, 2020; and New York, USA; March 29, 2020: Results from a sub-study of 70 patients with end-stage ischemic heart failure and a Left Ventricular Assist Device (LVAD), of 159 randomized patients who received either Mesoblast's allogeneic mesenchymal precursor cell (MPC) product candidate Revascor® or saline, were presented on March 28 at the American College of Cardiology (ACC) Virtual Scientific Sessions. The full results from these 70 patients will be published in a peer-reviewed journal.

When compared to controls, in MPC recipients:

- the mean proportion of temporary weans from LVAD support was higher (64% vs 43%; relative risk (RR) 1.55; 95% confidence interval (CI) 1.01-2.36)
- the rate of mucosal bleeding was lower (4.2 vs 28/100 patient-months; RR 0.15; CI 0.05, 0.40)
- there were fewer serious adverse events (66.06 vs 120.35/100 patient-months; RR 0.55; CI 0.31,0.97)
- there were fewer readmissions (0.59 vs. 1.14/100 patient-days; RR 0.52; CI 0.28, 0.95).

The conclusions were:

- MPCs had a beneficial effect on LVAD weaning, major mucosal bleeding, serious adverse events, and readmissions in ischemic heart failure patients
- these findings may reflect the effect of MPCs on angiogenesis, inflammation and endothelial dysfunction, and warrant further clinical research.

End-stage ischemic heart failure patients with LVADs are older and have co-morbidities such as diabetes, thereby closely resembling the majority of patients in Mesoblast's 566-patient Phase 3 trial for advanced chronic heart failure, planned to readout in mid-2020.

Revascor is being developed for use in end-stage ischemic heart failure patients with LVADs under existing FDA Regenerative Medicine Advanced Therapy (RMAT) and Orphan Drug Designations.

About Mesoblast

Mesoblast Limited (ASX: MSB; Nasdaq: MESO) is a world leader in developing allogeneic (off-the-shelf) cellular medicines. The Company has leveraged its proprietary mesenchymal lineage cell therapy technology platform to establish a broad portfolio of commercial products and late-stage product candidates. Mesoblast'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 has filed a Biologics License Application to the United States Food and Drug Administration (FDA) to seek approval of its product candidate RYONCILTM (remestemcel-L) for steroid-refractory acute graft versus host disease (acute GvHD). Remestemcel-L is also being developed for other rare diseases. Mesoblast is completing Phase 3 trials for its product candidates for advanced heart failure and chronic low back pain. If approved, RYONCIL is expected to be launched in the United States in 2020 for pediatric steroid-refractory acute GVHD. 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.

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Mesoblast has a strong and extensive global intellectual property (IP) portfolio with protection extending through to at least 2040 in all major markets. This IP position is expected to provide the Company with substantial commercial advantages as it develops its product candidates for these conditions.

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

Forward-Looking Statements

This announcement 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 timing, progress and results of Mesoblast's preclinical and clinical studies; Mesoblast's ability to advance product candidates into, enroll and successfully complete, clinical studies; the timing or likelihood of regulatory filings and approvals; 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, 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

For further information, please contact:

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FDA ACCEPTS MESOBLAST'S BIOLOGICS LICENCE APPLICATION FOR RYONCIL™ AND AGREES TO PRIORITY REVIEW

Melbourne, Australia; April 1, 2020; and New York, USA; March 31, 2020: Mesoblast Limited (ASX:MSB; Nasdaq: MESO), global leader in cellular medicines for inflammatory diseases, today announced that the United States Food and Drug Administration (FDA) has accepted for priority review the Company's Biologics License Application (BLA) filing for RYONCILT^M (remestemcel-L), its allogeneic cell therapy for the treatment of children with steroid-refractory acute graft versus host disease (SR-aGVHD). The FDA has set a Prescription Drug User Fee Act (PDUFA) action date of September 30, 2020, and if approved, Mesoblast will make RYONCIL immediately available in the United States.

A Priority Review designation will direct overall attention and resources to the evaluation of applications for drugs that, if approved, would be significant improvements in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions when compared to standard applications. The FDA has advised that they are planning to hold an Advisory Committee Meeting to discuss this application.

Mesoblast Chief Executive Dr Silviu Itescu stated: "There is a critical need to improve survival outcomes in children suffering from the more advanced stages of this devastating disease. The acceptance of the BLA represents an important milestone for the Company. Mesoblast is on track in its preparation for the potential launch of RYONCIL, including meeting its target inventory build and commercial team roll-out."

About Acute GVHD

Acute GVHD occurs in approximately 50% of patients who receive an allogeneic bone marrow transplant (BMT). Over 30,000 patients worldwide undergo an allogeneic BMT annually, primarily during treatment for blood cancers, and these numbers are increasing.¹ In patients with the most severe form of acute GVHD (Grade C/D or III/IV) mortality is as high as 90% despite optimal institutional standard of care.^{2,3}. There are currently no FDA-approved treatments in the US for children under 12 with SR-aGVHD.

About RYONCILTM

Mesoblast's lead product candidate, RYONCIL (remestemcel-L), is an investigational therapy comprising culture- expanded mesenchymal stem cells derived from the bone marrow of an unrelated donor. It is administered to patients in a series of intravenous infusions. RYONCIL is believed to have immunomodulatory properties to counteract the inflammatory processes that are implicated in SR- aGVHD by down-regulating the production of pro-inflammatory cytokines, increasing production of anti-inflammatory cytokines, and enabling recruitment of naturally occurring anti-inflammatory cells to involved tissues.

References

- 1. 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.
- 2. Westin, J., Saliba, RM., Lima, M. (2011) Steroid-refractory acute GVHD: predictors and outcomes. Advances in Hematology.
- 3. 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 transplantation. Bone Marrow Transplantation.

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Release authorized by the Chief Executive.

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