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 March 2023

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 10				
Yes □ No ☑				

INFORMATION CONTAINED ON THIS REPORT ON FORM 6-K

On March 22, 2023, 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.

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: March 22, 2023

INDEX TO EXHIBITS

Item

99.1 Press release of Mesoblast Ltd, dated March 22, 2023.

asx announcement



FDA SCHEDULES PRE-LICENSE INSPECTION OF REMESTEMCEL-L MANUFACTURING

Biologics License Application (BLA) Resubmission for Pediatric Acute Graft-Versus-Host Disease (SR-aGVHD) Currently Being Reviewed

PDUFA Goal Date August 2, 2023

If Approved, Remestemcel-L will be the First Allogeneic "Off-the-Shelf" Cellular Medicine in the US, and the First Therapy for Children Under 12 Years Old with SR-aGVHD

Melbourne, Australia; March 22 and New York, USA; March 21, 2023: Mesoblast Limited (ASX:MSB; Nasdaq:MESO), global leader in allogeneic cellular medicines for inflammatory diseases, today announced that, as part of the ongoing review of the BLA for remestemcel-L in the treatment of children with SR-aGVHD, the United States Food and Drug Administration (FDA) has scheduled a Pre-License Inspection (PLI) of Mesoblast's cell therapy manufacturing operations at Lonza Bioscience in Singapore.

On March 7, 2023, the FDA accepted the Company's resubmission of the BLA for remestencel-L and set a Prescription Drug User Fee Act (PDUFA) goal date of August 2, 2023.

Remestemcel-L has FDA Fast Track designation, a process to facilitate the development and expedited review of therapies for serious conditions that fill unmet medical needs, and Priority Review designation, which is given to drugs that treat a serious condition and provide a significant improvement in safety or effectiveness over existing treatments. Survival outcomes have not improved over the past two decades for children or adults with the most severe forms of SR-aGVHD.¹⁻³ The lack of any approved treatments for children under 12 means that there is an urgent need for a therapy that improves the dismal survival outcomes in children.

"We are pleased that the pre-license inspection of our manufacturing operations has been scheduled. We look forward to continuing to work closely with FDA during the review period with the aim to make remestencel-L available as a therapy for children suffering from SR-aGVHD," said Mesoblast Chief Executive Silviu Itescu.

About Steroid-Refractory Acute Graft Versus Host DiseaseAcute 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, including about 20% in pediatric patients. SR-aGVHD is associated with mortality as high as 90% and significant extended hospital stay costs. There are currently no FDA-approved treatments in the US for children under 12 with SR-aGVHD.

About Remestemcel-L

Mesoblast's lead product candidate, Remestemcel-L, is an investigational therapy comprising culture expanded mesenchymal stromal cells derived from the bone marrow of an unrelated donor. It is administered to patients in a series of intravenous infusions. Remestemcel-L is believed to have immunomodulatory properties to counteract the inflammatory processes that are implicated in SRaGVHD 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.

The original BLA submission contained clinical outcomes of 309 children with SR-aGVHD treated with remestemcel-L showing consistent treatment responses and survival across three separate trials. The data were reviewed by the agency's panel of the Oncologic Drugs Advisory Committee (ODAC) which voted in favor 9:1 that the available data support the efficacy of remestemcel-L in pediatric patients with SR-aGVHD.

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The BLA resubmission now contains additional clinical and biomarker data, including from a propensity-matched study of children with high-risk disease, based on the validated MAP biomarker score, comparing outcomes in 25 children from Mesoblast's Phase 3 trial and 27 control children treated with various biologics, including ruxolitinib, from the Mount Sinai Acute GvHD International Consortium (MAGIC) database. The study showed that 67% of high-risk children treated with remestemcel responded positively to treatment within 28 days and were alive after 180 days compared to just 10% in both categories in the MAGIC group.

The BLA resubmission also contains results of a 4-year survival study performed by the Center for International Blood and Marrow Transplant Research (CIBMTR) on 51 evaluable patients with SR-aGVHD who were enrolled in the Phase 3 trial. The results demonstrated durability of the early day 180 survival benefits, with 63% survival at 1 year and 51% at 2 years in a group of children with predominantly grade C/D disease (89%) and with expected 2-year survival of just 25-38% using best available therapy. $^{1,8-9}$

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

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

Rashidi A'et al. Outcomes and predictors of response in steroid-refractory acute graft-versus-host

Rashidi A et al. Outcomes and predictors of response in steroid-refractory acute graft-versus-host disease: single-center results from a cohort of 203 patients. *Biol Blood Bone Marrow Transplant* 2019; 25(11):2297-2302. Berger M, Pessolano R, Carraro F, Saglio F, Vassallo E, Fagioli F. Steroid-refractory acute graft-versus-host disease graded III-IV in pediatric patients. A mono-institutional experience with a long-term follow-up. *Pediatric Transplantation*. 2020; 24(7):e13806 Biavasco F, Ihorst G, Wasch R, Wehr C, Bertz H, Finke J, Zeiser R. Therapy response of glucocorticoid-refractory acute GVHD of the lower intestinal tract. *Bone Marrow Transplantation*. 2022 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. HRSA Transplant Activity Report, CIBMTR, 2019 Westin, J., Saliba, RM., Lima, M. (2011) Steroid-refractory acute GVHD: predictors and outcomes. *Advances in Hematology*. 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*. MacMillan ML et al. Pediatric acute GVHD: clinical phenotype and response to upfront steroids. *Bone Marrow Transplant* 2020; 55(1): 165-171

Zeiser R et al. Ruxolitinib for Glucocorticoid-Refractory Acute Graft-versus-Host Disease. N Engl J Med 2020;382:1800-10.

Forward-Looking Statements

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 expressed or implied by these forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private 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, riming, 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 rials; Mesoblast's ability to advance its manufacturing capabilities; the timing or likelihood of regulatory filings and approvals, 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 benefits of strategic collaboration agreements and Mesoblast's ability to establish and maintain intellectual property on its product candidates and Mesoblast's ability to establish and maintain intellectual property on its product candidates and Mesoblast's financial performance; developments relating to Mesoblast's competitors and industry; and the pricing and reimbursement of Mesoblast's financial performance; developments relating to Mesoblast's are product candidates, and is needed. Year of the product candidates and technology; estimates of Mesoblast's evenues, capital re

Release authorized by the Chief Executive.

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