

CHAIR'S ADDRESS TO SHAREHOLDERS

2025 ANNUAL GENERAL MEETING

Good morning shareholders. Welcome to the 2025 Mesoblast Annual General Meeting.

Shareholders, it gives me great pleasure to address you in person following a groundbreaking year marked by tremendous progress since we achieved FDA approval for Ryoncil®, truly the greatest milestone in our Company's history.

Ryoncil® was approved in December by the United States Food and Drug Administration for steroid-refractory acute graft-versus-host disease in children – the first mesenchymal stromal cell therapy ever approved by the FDA.

This milestone is the culmination of many years of scientific, regulatory, and clinical excellence and commitment. I wish to extend my deepest gratitude to our Executive team led very capably and with great resilience by our Chief Executive Dr Silviu Itescu, and to our whole staff for their dedication, creativity, and persistence.

The FDA approval of Ryoncil® is not simply a regulatory milestone: it is a turning point in our transition from development to commercialization, and a powerful validation of Mesoblast's scientific platform, manufacturing rigor, and clinical strategy. The commercial launch of Ryoncil® has been executed flawlessly with strong uptake to date and growing sales, which have exceeded our expectations. We are very pleased with the commercial and government reimbursement that is now in place, as we ensure that all children with this devastating disease have access to our life-saving treatment with payor coverage now extending to over 260 million lives in the U.S. as well as successful onboarding and physician adoption.

While continuing to manage cash spend carefully, the Mesoblast management team is also expanding Ryoncil® use to additional indications in children and adults with severe inflammatory conditions, making this a very valuable franchise. Achieving a first FDA approval and demonstrating successful product commercialization provides important validation for our whole strategy and value chain of our technology platforms. The learnings from Ryoncil® are being adapted to the rest of the company's pipeline and will hold us in good stead as we work towards further FDA approvals for our cardiovascular and back pain indications for our second-generation stromal cell technology platform.

I would like to acknowledge the unique skillsets of my fellow Board members, enhanced this year with the appointments of Dr Gregory George and Ms Lyn Cobley whose operational and financial guidance will be of immeasurable benefit to our management team. In the normal course of business and in line with our commitment to sound governance we will undertake succession planning and rotation of the Board in the coming twelve months to enhance U.S. commercial biotech experience, ensuring the right blend of expertise, tenure and renewal.

Finally, to our shareholders — thank you for your patience, belief, and partnership in this journey. We are now a commercial company with an approved therapy, and I remain confident that you will see the compounding rewards of your support.

About Mesoblast

Mesoblast (the Company) is a world leader in developing allogeneic (off-the-shelf) cellular medicines for the treatment of severe and life-threatening inflammatory conditions. The therapies from the Company's proprietary mesenchymal lineage cell therapy technology platform 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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Mesoblast's Ryoncil® (remestemcel-L-rknd) for the treatment of steroid-refractory acute graft versus host disease (SR-aGvHD) in pediatric patients 2 months and older is the first FDA-approved mesenchymal stromal cell (MSC) therapy. Please see the full Prescribing Information at www.ryoncil.com.

Mesoblast is committed to developing additional cell therapies for distinct indications based on its remestemcel-L and rexlemestrocel-L allogeneic stromal cell technology platforms. Ryoncil® is being developed for additional inflammatory diseases including SR-aGvHD in adults and biologic-resistant inflammatory bowel disease. Rexlemestrocel-L is being developed for heart failure and chronic low back pain. The Company has established commercial partnerships in Japan, Europe and China.

About Mesoblast intellectual property: Mesoblast has a strong and extensive global intellectual property portfolio, with over 1,000 granted patents or patent applications covering mesenchymal stromal cell compositions of matter, methods of manufacturing and indications. These granted patents and patent applications provide commercial protection extending through to at least 2044 in all major markets.

About Mesoblast manufacturing: 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 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 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, manufacturing activities and product marketing activities, if any; the commercialization of Mesoblast's RYONCIL for pediatric SR-aGvHD and any other 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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