

MESOBLAST KEY OPINION LEADER EVENT SERIES FOR INVESTORS & ANALYSTS

Chronic Low Back Pain due to Degenerative Disc Disease

Melbourne, Australia; June 9, and New York, USA; June 8, 2022: Mesoblast Limited (ASX:MSB; Nasdaq:MESO), global leader in allogeneic cellular medicines for inflammatory diseases, will host a webinar focused on the current treatment landscape and unmet medical need for patients with chronic low back pain (CLBP) due to degenerative disc disease, a condition associated with local inflammation in the disc. The webinar will feature presentations from Key Opinion Leaders (KOLs) Douglas P. Beall, MD, FIPP, FSIR, DAAPM (Clinical Radiology Oklahoma) and Hyun W. Bae, MD (Spine-Center at Cedars-Sinai Medical Center).

Mesoblast's Chief Executive Silviu Itescu will provide an overview of the three-year outcomes from the completed 404 patient randomized controlled Phase 3 trial of rexlemestrocel-L in patients with CLBP due to degenerative disc disease and regulatory pathway to market.

The webinar will begin at 6.00pm EDT, Thursday, June 16; 8.00am AEST, Friday, June 17, 2022. Registration will be required in advance for the webcast, to access [click here](https://lifesci.rampard.com/WebcastingAppv5/Events/eventsDispatcher.jsp?Y2Ik=MTg2OA==) or use the following link: <https://lifesci.rampard.com/WebcastingAppv5/Events/eventsDispatcher.jsp?Y2Ik=MTg2OA==>

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

Speaker Biographies

Douglas P. Beall, MD, FIPP, FSIR, DAAPM

Douglas P. Beall, MD, FIPP, FSIR, DAAPM attended medical school at Georgetown University School of Medicine in Washington, DC, and completed his residency at The Johns Hopkins Hospital in Baltimore, Maryland. Following residency, he was Chief of Interventional Services at Sheppard Air Force Base in Wichita Falls, Texas. He then completed a fellowship in Musculoskeletal Radiology at Mayo Clinic in Rochester, Minnesota, where he was trained in interventional spine techniques before returning to the US Air Force as Division Chief of Musculoskeletal Radiology. Following his service as a Major in the US Air Force Dr. Beall was chief of Musculoskeletal Radiology and Fellowship Director at the University of Oklahoma prior to entering private practice as the Chief of Services. In addition to his expertise in musculoskeletal imaging and interventional spine care, Dr. Beall is actively involved in teaching and research. He is board-certified in Diagnostic Radiology, has an added fellowship in Musculoskeletal Radiology, is a Diplomate of the American Academy of Pain Management and is a Fellow of the Society of Interventional Radiology and Interventional Pain Practice and board certified by the World Institute of Pain. He is currently in private practice focused on interventional pain management and orthopedic imaging.

Dr. Beall has published more than 250 articles in peer-reviewed journals, authored 6 textbooks and 75 textbook chapters, given more than 1000 invited lectures and scientific presentations and has participated in 55 clinical research trials. He is currently the Chief of Services for Comprehensive Specialty Care in Oklahoma City as well as the Division Head of Interventional Spine Care and Director of Pain Management Fellowship Programs at the Spine Fracture Institute and the Comprehensive Care Surgical Center.

Hyun W. Bae, MD

Hyun W. Bae, MD is an orthopedic and spine fellowship trained board-certified orthopedic surgeon. Dr Bae joined the Spine-Center at Cedars-Sinai Medical Center in 2010. He is currently Professor of Surgery in the Department of Orthopedic Surgery Cedars-Sinai Medical Center, Director of Education and Fellowship program.

Dr. Bae began his medical studies at Columbia University School of Engineering and Applied Sciences where he graduated with a degree in biomechanics. He then went on to earn his medical degree, cum laude, at Yale University School of Medicine. Dr. Bae completed his surgical internship at North Shore

University Hospital and his orthopedic surgical residency at the Hospital for Special Surgery in New York. He completed his spine fellowship at Case Western Hospital in Cleveland under the mentorship of late Henry H. Bohlman, MD.

During 1993-1994 he performed research in Molecular and Cell Biology, NIH Howard Hughes Research Fellow Bethesda, MD. It was during that time, he caught the passion for musculoskeletal tissue engineering while working with scientists Guilak F, Setton LA, Soslowsky LJ, as an undergraduate in Dr. Van Mow's cartilage research laboratory.

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

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

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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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