

MESOBLAST DIRECTOR RECOGNIZED BY PEERS FOR CARDIOVASCULAR LEADERSHIP

New York, USA, and Melbourne, Australia; January 31, 2017: Mesoblast Limited (ASX: MSB, Nasdaq: MESO) today announced that its non-executive Director, Dr Eric A. Rose, was awarded the 2017 Earl Bakken Scientific Achievement Award by The Society of Thoracic Surgeons during the organization's 53rd Annual Meeting held last week in Houston, Texas. This award, established through a grant from Medtronic, Inc., honors individuals who have made outstanding scientific contributions that have enhanced the practice of cardiothoracic surgery and patients' quality of life. Dr Rose is a world renowned cardiovascular surgeon and heart failure expert, who provides Mesoblast with deep insight in the design and conduct of the Company's cardiovascular clinical programs.

From 1994 through 2007, Dr Rose served as Surgeon-in-Chief at New York-Presbyterian Hospital and Chairman of the Department of Surgery at the Columbia University College of Physicians and Surgeons. At Columbia, he pioneered heart transplantation in children, performing the world's first successful pediatric heart transplant in 1984. Since that historic achievement, Dr Rose has continued to study and improve cardiac surgical care in children and adults. Much of his research has focused on the management of end-stage heart disease using artificial circulatory support. Notably, Dr Rose led the United States National Institutes of Health (NIH)-funded Randomized Evaluation of Mechanical Assistance for the Treatment of Congestive Heart Failure (REMATCH) trial which conclusively showed that long-term use of an implantable left ventricular assist device (LVAD) prolongs and enhances life in end-stage heart disease patients who are unable to undergo heart transplantation.

Currently, the United States Cardiothoracic Surgical Trials Network is conducting an NIH-funded Phase 2b trial in 159 patients to evaluate whether Mesoblast's MPC-150-IM product candidate can improve heart function and quality of life in end-stage heart failure patients following LVAD implantation. Enrollment in this trial is expected to be completed in the first half of this calendar year, with top-line data anticipated to be available by the end of 2017. If successful, the results from this trial may be used to support a marketing approval application for MPC-150-IM in chronic advanced heart failure.

About Mesoblast

Mesoblast Limited (ASX:MSB; Nasdaq:MESO) is a global leader in developing innovative cell-based medicines. The Company has leveraged its proprietary technology platform, which is based on specialized cells known as mesenchymal lineage adult stem cells, to establish a broad portfolio of late-stage product candidates. Mesoblast's allogeneic, 'off-the-shelf' cell product candidates target advanced stages of diseases with high, unmet medical needs including cardiovascular diseases, immune-mediated and inflammatory disorders, orthopedic disorders, and oncologic/hematologic conditions.

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. 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

Mesoblast Limited
ABN 68 109 431 870
www.mesoblast.com

Corporate Headquarters
Level 38
55 Collins Street
Melbourne 3000
Victoria Australia

T +61 3 9639 6036
F +61 3 9639 6030

United States Operations
505 Fifth Avenue
Third Floor
New York, NY 10017
USA

T +1 212 880 2060
F +1 212 880 2061

Asia
20 Biopolis Way
#05-01 Centros
Biopreneur 3
SINGAPORE 138668

T +65 6570 0635
F +65 6570 0176

update or revise any forward-looking statements, whether as a result of new information, future developments or otherwise.

For further information, please contact:

Julie Meldrum
Corporate Communications
Mesoblast
T: +61 3 9639 6036
E: julie.meldrum@mesoblast.com

Schond Greenway
Investor Relations
Mesoblast
T: +1 212 880 2060
E: schond.greenway@mesoblast.com

Mesoblast Limited
ABN 68 109 431 870
www.mesoblast.com

Corporate Headquarters
Level 38
55 Collins Street
Melbourne 3000
Victoria Australia
T +61 3 9639 6036
F +61 3 9639 6030

United States Operations
505 Fifth Avenue
Third Floor
New York, NY 10017
USA
T +1 212 880 2060
F +1 212 880 2061

Asia
20 Biopolis Way
#05-01 Centros
Biopreneur 3
SINGAPORE 138668
T +65 6570 0635
F +65 6570 0176