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MESOBLAST TARGETS BROADER CANCER INDICATIONS FOR BONE MARROW TRANSPLANT PRODUCT

Key Points:

- Potential market more than doubles for "off-the-shelf" adult stem cell product
- New cancer indications to include multiple myeloma
- Regulatory approval strategies to focus on achieving superior long-term outcomes
- Accelerated clinical pathway under existing Orphan Drug Designation status

Melbourne, Australia; 14 October 2010: Australian regenerative medicine company Mesoblast Limited (ASX: MSB, USOTC: MBLTY) today announced that it is broadening the oncology applications of its "off-the-shelf" cell product for expansion of haematopoietic stem cells in patients with blood cancers. Building on the recent clinical success of Mesoblast's proprietary cell product for expansion of cord blood, the Company will now address new markets where expansion of haematopoietic stem cells can make a meaningful impact on clinical outcomes, including diseases such as multiple myeloma.

Over 60,000 bone marrow transplants using haematopoietic stem cells are performed annually to rebuild the bone marrow of patients with cancers following high-dose chemotherapy. Cord blood expanded by Mesoblast's "off-the-shelf" product addresses less than half of these. Mesoblast's new strategy will enable the company to potentially target the entire bone marrow transplant market.

A major impediment to successful outcomes following bone marrow transplantation is the presence of residual cancer cells remaining in a patient's own bone marrow peripheral blood progenitor cells (PBPCs) at the time of re-infusion. Strategies that remove cancerous cells while expanding healthy haematopoietic stem cells in the PBPCs prior to re-infusion have the potential to result in superior long-term outcomes.

In a collaborative study with Dr Yago Nieto and Professor Elizabeth Shpall in the Department of Stem Cell Transplantation and Cellular Therapy at the University of Texas MD Anderson Cancer Center, Mesoblast's proprietary "off-the-shelf" cell product was used successfully to achieve rapid and significant expansion of haematopoietic stem cells from the bone marrow PBPCs of patients with multiple myeloma after residual cancer cells had been removed.

The new uses of Mesoblast's proprietary "off-the-shelf" cell product for bone marrow transplantation will continue to be developed under the Company's existing United States Food and Drug Administration (FDA) orphan drug designation for expanding haematopoietic stem and progenitor cell numbers in patients with haematologic malignancies, such as multiple myeloma.

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For the past 10 years Professor Shpall and her colleagues at the MD Anderson Cancer Center have been developing cutting-edge procedures for the ex vivo expansion of haematopoietic stem cells.

"Mesoblast's cells have enabled us to generate the most promising expansion results to date," Professor Shpall said. "This will enable us to develop and test novel strategies to eliminate residual cancerous cells in the bone marrow of gravely ill patients, then expand their own haematopoietic progenitors to rebuild the bone marrow.

"We hope that such strategies will improve the survival and cure rates of patients with life-threatening bone marrow cancers," she added.

About Orphan Drug Designation
Orphan drug designation is reserved for therapies which are being developed for conditions affecting up to 200,000 patients annually in the United States, and allows for an accelerated review process by the FDA, seven-year market exclusivity in the United States upon obtaining marketing authorisation, tax benefits, and exemption from user fees.

About Mesoblast Limited
Mesoblast Limited (ASX:MSB; ADR:MBLTY) is a world leader in commercialising biologic products for the broad field of regenerative medicine. Mesoblast has the worldwide exclusive rights for a series of patents and technologies developed over more than 10 years relating to the identification, extraction, culture and uses of adult Mesenchymal Precursor Cells (MPCs). www.mesoblast.com

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