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FIRST HEART FAILURE PATIENTS SUCCESSFULLY IMPLANTED IN UNITED STATES

Australian technology being tested in first trial of allogeneic, or "off-the-shelf", adult stem cells for congestive heart failure

Melbourne, Australia; October 13, 2008 – Australia's regenerative medicine company, Mesoblast Limited (ASX: MSB; USOTC: MBLTY), today announced successful early safety results in the world's first clinical trial to use allogeneic, or "off-the-shelf", adult stem cells from an unrelated donor to treat patients with congestive heart failure.

Safety data from the first seven patients enrolled in the Phase 2 trial by Mesoblast's US-based sister company Angioblast Systems Inc. at medical centres in Arizona, California and Minnesota, were presented today at the Transcatheter Cardiovascular Therapeutics (TCT) Conference in Washington D.C.

The trial is testing the safety and effectiveness of Revascor™, the proprietary Mesenchymal Precursor Cell (MPC) product injected by catheter into damaged heart muscle of patients with congestive heart failure.

No cell-related adverse events had occurred in any of the first patients implanted, Dr. Nabil Dib, Director of Cardiovascular Research, Chandler and Mercy Gilbert Medical Center, Arizona, and Associate Professor of Medicine, University of California at San Diego, reported to the conference.

Revascor™ is delivered to damaged areas of the heart by a minimally invasive cardiac catheterisation procedure performed under local anaesthesia while the patient is awake. Patients undergoing the procedure are released from the hospital within 24 hours.

The placebo-controlled trial will randomise up to 60 patients suffering from congestive heart failure, including those with non-ischemic cardiomyopathy, to either implantation with allogeneic adult stem cells or standard of care in a 3:1 ratio.

Dr. Dib said: "We hope that these stem cells will increase the potential for myocardial repair and restoration of heart function. Revascor™ contains a well-characterised, pure population of MPCs. These cells, obtained from a healthy young adult donor, are isolated, expanded and cultured to produce treatments potentially for thousands of patients."

According to company founder, Professor Silviu Itescu, "Heart failure remains a major cause of hospital admissions and patient deaths. Based on studies to date, Revascor™ has the potential to make a significant impact in patients with heart failure and to address this major clinical need.

"This Phase 2 clinical trial is an important step toward our entry into this vital and growing market," Professor Itescu said.

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About Heart Failure
There are currently five million people in the United States with congestive heart failure, with over 550,000 new cases annually. The extensive morbidity and mortality associated with this disease make it a principal health and economic burden in the Western world. Heart failure results from the progressive deterioration of heart muscle function, leading to its inability to pump sufficient blood to the body's tissues, organs and limbs. The most common causes of heart failure are atherosclerosis (blockage of the coronary arteries), prior heart attack, hypertension, and rhythm disturbances. Existing therapies do not result in repair or regeneration of heart muscle. Revascor™, a trademark of Angioblast Systems Inc, is being developed to rebuild both blood vessels and heart muscle.

About Mesoblast

Mesoblast Limited (ASX:MSB; USOTC:MBLTY) is committed to the development of novel treatments for orthopaedic conditions, including the rapid commercialisation of a unique adult stem cell technology aimed at the regeneration and repair of bone and cartilage. Our focus is to progress through clinical trials and international regulatory processes necessary to commercialise the technology in as short a timeframe as possible. Mesoblast has the worldwide exclusive rights for a series of patents and technologies that have been developed over more than 10 years and which relate to the identification, extraction and culture of adult Mesenchymal Precursor Cells (MPCs). The Company has acquired 39% of Angioblast Systems Inc., an American company developing the platform MPC technology for the treatment of cardiovascular diseases including repair and regeneration of blood vessels and heart muscle. Mesoblast and Angioblast are jointly funding and progressing the core technology. Mesoblast's strategy is to maximise shareholder value through both corporate partnerships and the rapid and successful completion of clinical milestones.

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