mesoblast
the regenerative medicine company

asx announcement

SUSTAINED SIX-MONTH IMPROVEMENT IN HEART MUSCLE FUNCTION BY "OFF-THE-SHELF" ADULT STEM CELLS

Heart failure clinical trial results highlighted at American Heart Association annual meeting

Melbourne, Australia; 18 November 2008: Australia's regenerative medicine company, Mesoblast Limited (ASX:MSB;USOTC:MBLTY), announced today that the first group of patients who received the lowest dose of Revascor™, the proprietary "off-the-shelf" adult stem cell product for heart failure, continued to show sustained improvement in heart muscle function at six months. Interim results of the ongoing Phase 2 trial of Revascor™ were presented at the annual conference of the American Heart Association, currently underway in Orlando, Florida.

The randomised, placebo-controlled Phase 2 trial is being run at various sites in the United States, including California, Arizona, Minnesota, and Texas by Mesoblast's United States-based associate company Angioblast Systems Inc. The trial aims to compare one of three increasing doses of Revascor™ against standard of care in up to 60 patients suffering from moderate-severe congestive heart failure, defined as a baseline ejection fraction (EF) 40% or lower by echocardiogram. Each dose is tested in a group of 20 patients, randomised 3:1 treated to control patients.

Results from the first group of patients receiving the lowest dose of Revascor™ were presented to the American Heart Association by lead investigator Dr. Nabil Dib, Associate Professor of Medicine and Director of Cell Therapy, University of California, San Diego, and Director of Cardiovascular Research, Mercy Gilbert and Chandler Medical Centers, Phoenix, Arizona.

Patients who received a single injection of Revascor™ into damaged heart muscle had significantly improved cardiac function at both three and six months compared with baseline. At six months, a single dose of Revascor™ was accompanied by a 22% mean *increase* in EF, whereas controls had an 18% mean *decrease* in EF over the same time period. There were no cell-related adverse events. The observed improvement between treated and controlled patients on top of medical standard of care was over two-fold higher than previously reported with existing device therapies.

Dr. Dib said: "The sustained improvement in heart muscle function seen over a six-month period with the lowest dose tested, together with the excellent safety profile, suggest that Revascor™ cell therapy may play an important role in the treatment of heart failure, improving quality of life and even survival."

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. Forty patients have already been treated, with the final group of 20 patients evaluating the highest dose of Revascor™ expected to complete enrolment in early 2010.

mesoblast
the regenerative medicine company

asx announcement

About Heart Failure
Congestive heart failure remains a leading cause of hospital admissions, morbidity and mortality in the Western world. There are currently more than five million people in the United States suffering from congestive heart failure, with over 550,000 new cases annually. Despite major strides in prevention and treatment, heart failure is responsible for about 1.1 million hospitalisations in the US alone each year, and some 300,000 deaths. Total direct costs in the US exceed $US 33 billion annually.

About Revascor™
Revascor™, a trademark of Angioblast Systems Inc, is an allogeneic cell therapy product being developed to reverse congestive heart failure by rebuilding 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 developed over more than 10 years that relate to the identification, extraction and culture of adult Mesenchymal Precursor Cells (MPCs). The Company has acquired 38.4% 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.

For further information, please contact:

Julie Meldrum
Corporate Communications Director
Mesoblast Limited
T: + 61 (03) 9639 6036
M: +61 (0) 419 228 128
E: julie.meldrum@mesoblast.com