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MESOBLAST'S STEM CELLS PROTECT KNEE CARTILAGE IN OSTEOARTHRITIS

Trial Results Identify Next Major Market Opportunity for Mesoblast

Key points:

- Mesoblast's allogeneic, or donor unrelated, adult stem cells protected knee joint cartilage against destruction in osteoarthritis preclinical trials
- Mesoblast's stem cells significantly increased thickness and mechanical strength of knee joint cartilage
- Injection of allogeneic stem cells into damaged knee joints was safe and caused no adverse events
- Results significantly expand Mesoblast's clinical applications and global commercial market opportunities to include major inflammatory diseases of cartilage, such as osteoarthritis.

Melbourne, Australia; 20 August 2007: Australia's adult stem cell company, Mesoblast Limited (ASX:MSB;USOTC:MBLTY), today announced that preclinical trials of its patented adult stem cells had shown that the therapy significantly protected knee cartilage against damage in osteoarthritis.

The results of these trials signal Mesoblast's expansion of its clinical applications to inflammatory and degenerative diseases of joint cartilage, such as osteoarthritis, which affect over 43 million people annually in the United States alone.

"The results of this trial show for the first time that our off-the-shelf allogeneic stem cell product is effective for the treatment and protection of osteoarthritic joint cartilage," Mesoblast Founder, Professor Silviu Itescu, said.

"The osteoarthritis market represents at least as great a commercial opportunity for Mesoblast as does bone repair. Consequently, we will now seek to rapidly advance our new clinical program for the treatment of knee osteoarthritis," he said.

More than 10 million people in the US currently suffer from osteoarthritis of the knee, making it the most common joint disease. Osteoarthritis results in loss of cartilage which cannot repair itself after injury and for which there is no effective therapy. Current treatments attempt to alleviate painful symptoms but are unable to preserve the cartilage lining the joint. Moreover, many of the currently used pharmaceutical therapies are associated with severe side-effects and can even cause death. Joint replacement is often the only option for restoring function.

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With the support of the Australian Government's Commercial Ready Grant award, Mesoblast's cartilage trials evaluated the effectiveness and safety of the company's allogeneic (donor unrelated) adult stem cells to treat osteoarthritis of the knee in 48 sheep arthritic joints. The results showed that joint cartilage in osteoarthritic knees of animals receiving Mesoblast's stem cells had significantly greater thickness, reduced breakdown, and greater biomechanical strength three months after injection into the knee than did control joints receiving injections of hyaluronic acid.

The trial's principal investigator, Professor Rick Read at the Murdoch University in Western Australia, said: "We are delighted with the significant cartilage protective effects of Mesoblast's allogeneic cells in our large animal model of knee osteoarthritis, without any adverse events of the cells at all".

Mesoblast's Vice President for Cartilage Regenerative Programs, Professor Peter Ghosh, a world-renowned expert in diseases of cartilage, said the results obtained at three months were extremely encouraging.

"We are very excited by the results of these studies in a well-established model which we have used to test various anti-arthritic agents over the last 25 years."

Mesoblast will supply further details of its knee osteoarthritis clinical trial design and timing shortly.

About Mesoblast Limited

Mesoblast Limited (ASX:MSB;USOTC:MBLTY is an Australian biotechnology company committed to commercialisation of novel treatments for orthopaedic conditions, including a unique adult stem cell technology aimed at the regeneration and repair of bone and cartilage. Mesoblast has worldwide exclusive rights to a series of patents and technologies that have been developed over more than 10 years relating to the identification, extraction and culture of adult Mesenchymal Precursor Cells (MPCs). The company has also acquired a significant interest in 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's strategy is to maximise shareholder value through both corporate partnerships and rapid product commercialisation.

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