



EMBARGOED FOR RELEASE
Sunday, March 25, 11:00 AM CDT
Presentation Number: 2405-3

CONTACT:
Leslie Humbel, 202-955-6222
lhumbel@spectrumscience.com
Amy Murphy, (202) 375-6476
amurphy@acc.org
In New Orleans (March 24-27):
Marriott Convention Center
504-613-2418

FIRST HUMAN TRIAL TESTS STEM-CELL-BASED TREATMENT FOR HEART ATTACKS

NEW ORLEANS, La. (March 25, 2007) — Despite the enduring controversy surrounding the use of embryonic stem cells for disease research, scientists continue to evaluate the therapeutic potential of other types of stem cells. Previous research on the efficacy of stem cell therapy for heart repair has shown possible benefit from mesenchymal stem cells (MSCs) – cells found in bone marrow that create connective tissue, bone and cartilage. A study presented today at the American College of Cardiology's *Innovation in Intervention: i2 Summit* reveals the results of the first human trial using MSCs for the treatment of myocardial infarction (MI, or heart attack). *Innovation in Intervention: i2 Summit* is an annual meeting for practicing cardiovascular interventionalists sponsored by the American College of Cardiology in partnership with the Society for Cardiovascular Angiography and Interventions.

As a cell-based therapy, MSCs have a number of unique advantages: they can be taken from genetically distinct donors, are easy to prepare, and have a tendency to collect within injured areas. In animal models, MSCs not only home to regions of MI, but reduce infarct size and improve ejection fraction – the portion of blood that is pumped out of the heart as a result of a heartbeat, and a primary indicator of the heart's health.

Researchers from ten medical centers across the United States, led by Joshua Hare, M.D.,

- more -

2 – 2 – 2 MSC Trial

of the University of Miami, Miller School of Medicine, conducted a Phase 1 trial to assess the safety and efficacy of infusing MSCs intravenously to 53 patients within ten days of a heart attack. In the trial, patients were randomized to one of three doses: 0.5, 1.6 or 5 million MSCs/kg, and each dose was compared with placebo. The occurrence of treatment-related serious adverse events was evaluated over a six-month period, and efficacy was assessed using echocardiography.

Over the six month follow-up period, the stem cell-treated patients had lower rates of side effects such as cardiac arrhythmias, and had significant improvements in heart, lung and global function. Echocardiography showed improved heart function, particularly in those with large amounts of cardiac damage.

"This trial makes an important contribution in the field of stem cell-based treatments for heart disease by providing safety and efficacy data for a unique and promising type of stem cell to treat cardiac damage," said Joshua Hare, M.D., of the University of Miami and lead author of the study. "It's important to note that this study represents a first step, and, as in other disease categories, we must perform additional, larger trials to determine the real world application of mesenchymal stem cell therapy to fight heart disease."

Dr. Hare will present the results of "A Double-Blind, Randomized, Placebo Controlled Clinical Trial of Allogeneic Mesenchymal Stem Cells for the Treatment of Patients With Acute Myocardial Infarction" on Sunday, March 25 at 11:00 a.m. in room La Nouvelle Orleans C.

###

The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.07 and the i2 Summit is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.