



THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Office of Technology Management

NOVEL COMPOSITIONS AND METHODS FOR USING A BIOACTIVE PROTEIN TO INHIBIT APOPTOSIS AND INFLAMMATION IN STEM CELLS AND CARDIAC TISSUES

Market: About one million Americans die of heart disease each year, and it was estimated that over 13 million US citizens have cardiovascular disease. Peripheral artery disease is expected to effect 23 million people in developed countries by 2012 (Datamonitor). Atherosclerotic coronary artery disease is the number one cause of death in the US, and as such, the demand for therapeutics in this area is extreme.

Competitors and Current Problems: Surgeries and drug interventions used to address heart muscle damaged by heart disease is not only expensive, but often not curative. In critical situations where heart transplant is needed, the wait list is long with donors in short supply. The best of all possibilities is for the damaged heart to actually heal.

The Technology: Scientists at the University of Texas Health Science Center at Houston discovered a protein that is capable of regulating apoptosis and protect against inflammatory or oxidative injury. This unique protein, in its recombinant version or biologically active peptides, is effective at treating or preventing atherosclerosis-associated tissue damages, including aneurisms, and deterring or preventing stress response in transplanted stem cells, cardiac myocytes, vascular stem cells, and vascular smooth muscle cells. Included in the technology is use of stem cells for heart delivery and research tools such as transgenic mice. Data includes induced expression of the gene in tissue culture, synthesis of intracellular and secret forms of the protein, diagnostic kit development, activity showing the expressed gene induces downstream genes, and characterization of the transgenic mice.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSCH), for which the University has obtained patent protection.

UTHSCH Ref. No. 2004-0025

Inventors: Drs. Geng and Willerson

Patent Status: Pending

License Available: world-wide; exclusive or non-exclusive

To obtain further information about this technology, please contact:
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