

Secreted Factors From Stem Cells Protect Against Tissue Injury

Competitive Advantages

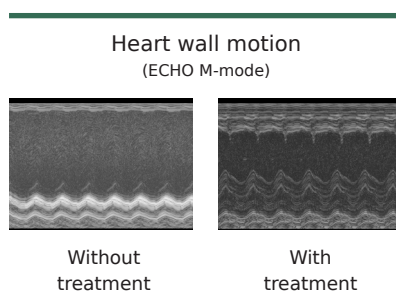
- ☑ Rescues almost 50 percent of tissues damaged by myocardial infarction or stroke.
- ☑ Halts damage to surrounding tissue.
- ☑ Patients can store harvested cells or CdM for future autologous use.

Oxygen and nutrient deprivation causes damage or death to mammalian cells, often resulting in ischemic injury to the affected tissues.

Cardiac and cerebral tissues are especially susceptible to ischemic injury, and this can lead to severe, widespread health consequences. In the United States, for example, 780,000 cases of stroke and 600,000 myocardial infarctions are diagnosed per year.

Tissue Protection and Repair

A new type of treatment may dramatically reduce the extent of ischemic injury, promote the healing of injured tissue, and protect tissue at risk from damage.



Defined subpopulations of multipotent stromal cells (MSCs) are isolated by bone marrow aspiration and magnetic cell sorting. Following expansion in culture, the cells secrete biologically active agents that increase the survival of

neurons and muscle cells after injury and promote tissue repair.

Intravenous injection of the cells or concentrated conditioned medium (CdM) within 24 hours of ischemic injury rescued almost 50 percent of affected tissue and prevented damage to surrounding tissues.

Next Steps

Additional investigations will seek to identify the specific secreted agents that provide tissue rescue and repair. An optimized combination of bioactive factors will be administered after injury.

Patent / Licensing Status

Patent pending. Exclusive rights available.

Learn More

MSCs/myocardial infarction abstract
www.ncbi.nlm.nih.gov/pubmed/17257581?ordinalpos=5&itool=EntrezSystem2_PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum

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