Matrix Assisted Myocardial Stabilization

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Technology description

This invention consists of a bioengineering and surgical method for the treatment of cardiac injuries by mechanical stabilization of the injured region. The technique involves the injection or implantation of a material into the border zone of the injury or infarct. When implanted, the material will integrate into the host myocardium and share the mechanical loads during the cardiac cycle, reduce the fiber stresses in the infarct zone, and prevent progression to congestive heart failure. In addition the material can be used as a carrier for the addition of transplanted cells for improved rates of healing.
The combined effect of matrix-associated reduction in fiber stress and enhanced transplanted cell survival has the potential to be a novel therapy to restore cardiac function and reduce heart failure.

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