Protein-engineered injectable hydrogel to improve retention of transplanted adipose-derived stem cells.

Journal: Adv Healthc Mater

Publication Year: 2013

Authors: Andreina Parisi-Amon, Widya Mulyasasmita, Cindy Chung, Sarah C Heilshorn

PubMed link: 23184882

Funding Grants: Preparation and Delivery of Clinically Relevant Numbers of Stem Cells Using 3D Hydrogels

Public Summary:
Improved retention of transplanted stem cells is achieved through minimally invasive delivery in MITCH, a mixing-induced two-component hydrogel that was engineered to possess shear-thinning and self-healing thixotropic properties. MITCH, an ideal injectable cell-delivery vehicle, supports 3D stem-cell culture, resulting in high cell viability and physiologically relevant cell morphology.

Scientific Abstract:
Improved retention of transplanted stem cells is achieved through minimally invasive delivery in MITCH, a mixing-induced two-component hydrogel that was engineered to possess shear-thinning and self-healing thixotropic properties. MITCH, an ideal injectable cell-delivery vehicle, supports 3D stem-cell culture, resulting in high cell viability and physiologically relevant cell morphology.