Regenerating Articular Cartilage with Heparan Sulfate Hydrogels using Human Adipose Derived Stem Cells

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Within the research the regeneration of Articular Cartilage using hADSC and Heparin Sulfate was conducted. Different degrees of Methacrylation were tested on hADSCs and in different hydrogels. These techniques were used to find the best collagen II production and cell proliferation. Hydrogels were created to allow the encapsulation of cells. It allowed the results to be found through quantitative reverse transcriptase polymerase chain reactions, histology, and live/dead staining. The overall goal of the project is to use biologically safe materials to help regenerate damaged articular cartilage.

Awards Won: