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Microparticle-Mediated Sequestration of Cell-Secreted Proteins to Modulate Chondrocytic Differentiation

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Abstract:

Protein delivery is often used in tissue engineering applications to control differentiation processes, but is limited by protein instability and cost. An alternative approach is to control the cellular microenvironment through biomaterial-mediated sequestration of cell-secreted proteins important to differentiation. Thus, we utilized heparin-based microparticles to modulate cellular differentiation via protein sequestration in an *in vitro* model system of endochondral ossification. Heparin and poly(ethylene-glycol) (PEG; a low-binding material

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