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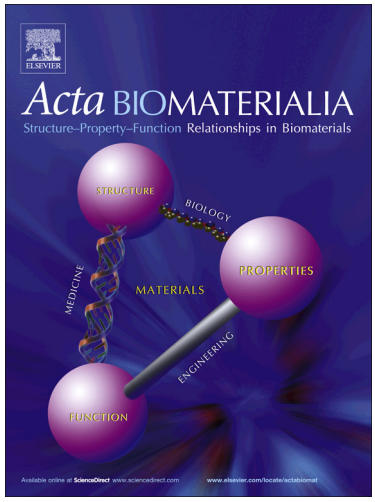

Full length article

A hybrid injectable hydrogel from hyperbranched PEG macromer as a stem cell delivery and retention platform for diabetic wound healing

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ACCEPTED MANUSCRIPT

A hybrid injectable hydrogel from hyperbranched PEG macromer as a stem cell delivery and retention platform for diabetic wound healing

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Keywords: diabetic wound healing, injectable hydrogels, hyperbranched polymers, stem cells, *in situ* RAFT

Abstract: The injectable hydrogel with desirable biocompatibility and tunable properties can improve the efficacy of stem cell-based therapy. However, the development of injectable hydrogel remains a great challenge due to the restriction of crosslinking efficiency, mechanical properties, and potential toxicity. Here, we report that a new injectable hydrogel system were fabricated from hyperbranched multi-acrylated poly(ethylene glycol) macromers (HP-PEGs) and thiolated hyaluronic acid (HA-SH) and used as a stem cell delivery and retention platform. The new HP-PEGs were synthesized *via in situ* reversible addition fragmentation chain transfer (RAFT) polymerization using an FDA approved anti-alcoholic drug - Disulfiram (DS)

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