Supporting Information

A Rapid Crosslinking Injectable Hydrogel for Stem Cell Delivery, from Multifunctional Hyperbranched Polymers via RAFT Homopolymerization of PEGDA

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Figure S1. Cellular metabolic activity for different crosslinking ratio evaluated by alamarBlue[®] assay at 12 h, 3 and 7 days post seeding. Vinyl:Thiol = 1:1 (blue); 1.5:1 (red); 2.5:1 (green); and 5:1 (purple). There was no significant difference between any groups at each time point (mean \pm SD, n = 3, P < 0.05).



Figure S2. Cell observation of the embedded rASCs in the hydrogels (2.5% and 5% of polymer entry 1 in Table 1, $M_n = 13$ kg/mol) under phase contrast microscope over time. The arrows highlight the cell proliferating. (Scale bars in all cases represent 100 μ m)



Figure S3. Cell morphological study of the embedded rASCs in the hydrogels (2.5% of polymer entry 1 in Table 1, $M_n = 13$ kg/mol) with (F+) and without (F-) adding fibrinogen (1% w/v). Cells were stained by Rhodamine Phalloidin (Molecular Probes[®], Red) for actin and Hoechest 33342 (Molecular Probes[®], Blue) for nucleus. (Scale bars in all cases represent 50 µm).



Figure S4. ¹³C NMR spectrum for hyperbranched polyPEGDA (entry 1 in Table 1).