

Supporting Information

**Injectable Biodegradable Hydrogels and Microgels Based on Methacrylated
Poly(ethylene glycol)-co-Poly(glycerol sebacate) Multi-block Copolymers:
Synthesis, Characterization, and Cell Encapsulation**

Yaobin Wu ^a, Ling Wang ^a, Baolin Guo ^{a,*}, Peter X Ma ^{a,b,c,d,e, *}

^a *Center for Biomedical Engineering and Regenerative Medicine, Frontier Institute of Science and Technology, Xi'an Jiaotong University, Xi'an, 710049, China*

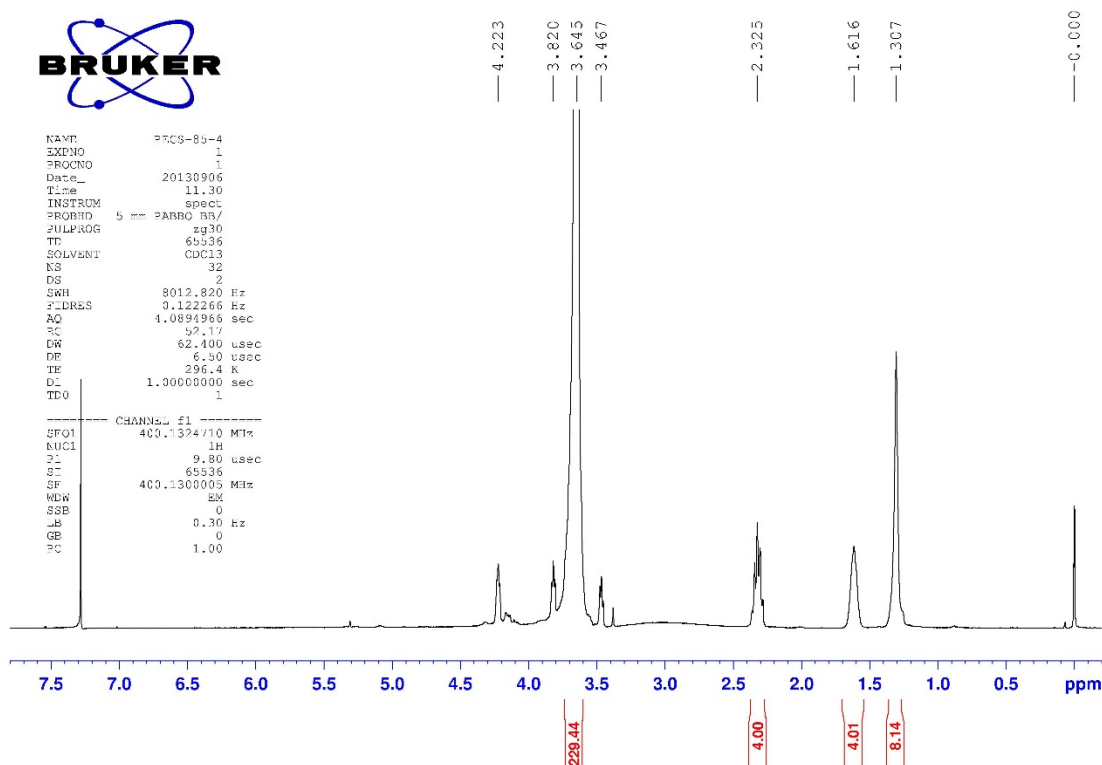
^b *Department of Biomedical Engineering, University of Michigan, Ann Arbor, MI 48109, USA*

^c *Department of Biologic and Materials Sciences, University of Michigan, 1011, North University Ave., Room 2209, Ann Arbor, MI 48109, USA*

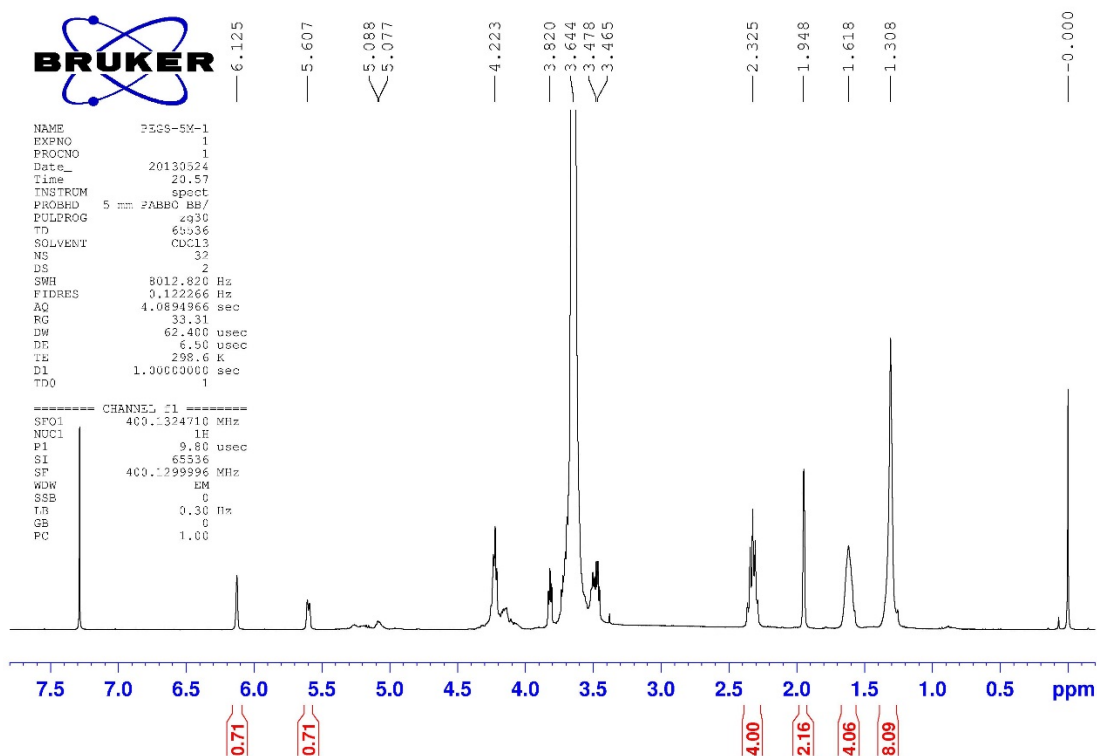
^d *Macromolecular Science and Engineering Center, University of Michigan, Ann Arbor, MI 48109, USA*

^e *Department of Materials Science and Engineering, University of Michigan, Ann Arbor, MI 48109, USA*

* To whom correspondence should be addressed. Tel.: +86-29-83395361. Fax: +86-29-83395131. E-mail: baoling@mail.xjtu.edu.cn, mapx@umich.edu.



(a) PEGS prepolymer



(b) PEGS-M copolymer

Fig. S1 The ^1H NMR spectra and processing window of PEGS and PEGS-M

polymers

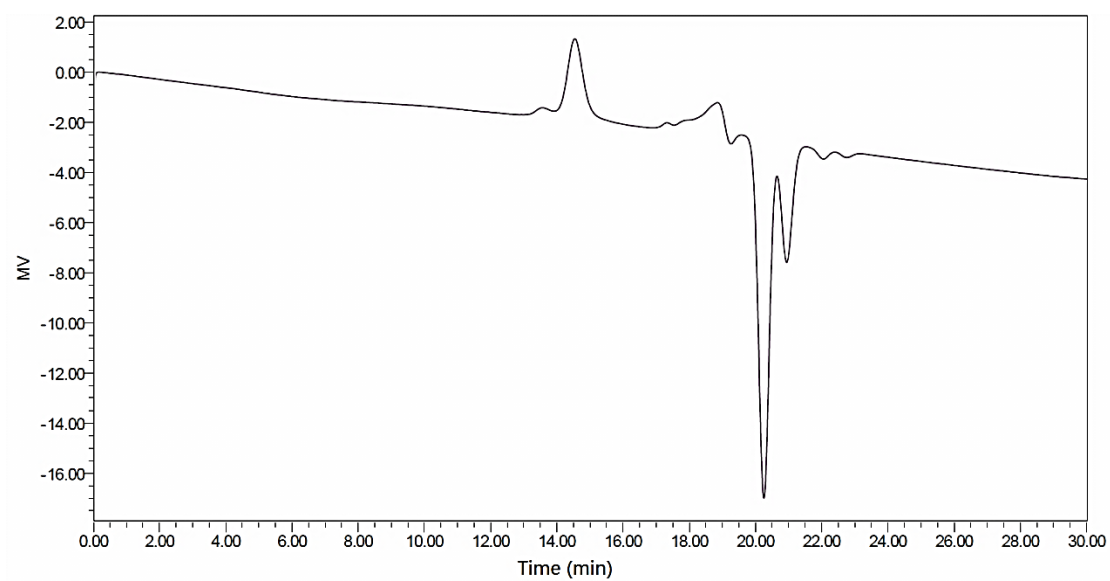


Fig. S2 The GPC curve of PEGS copolymer.

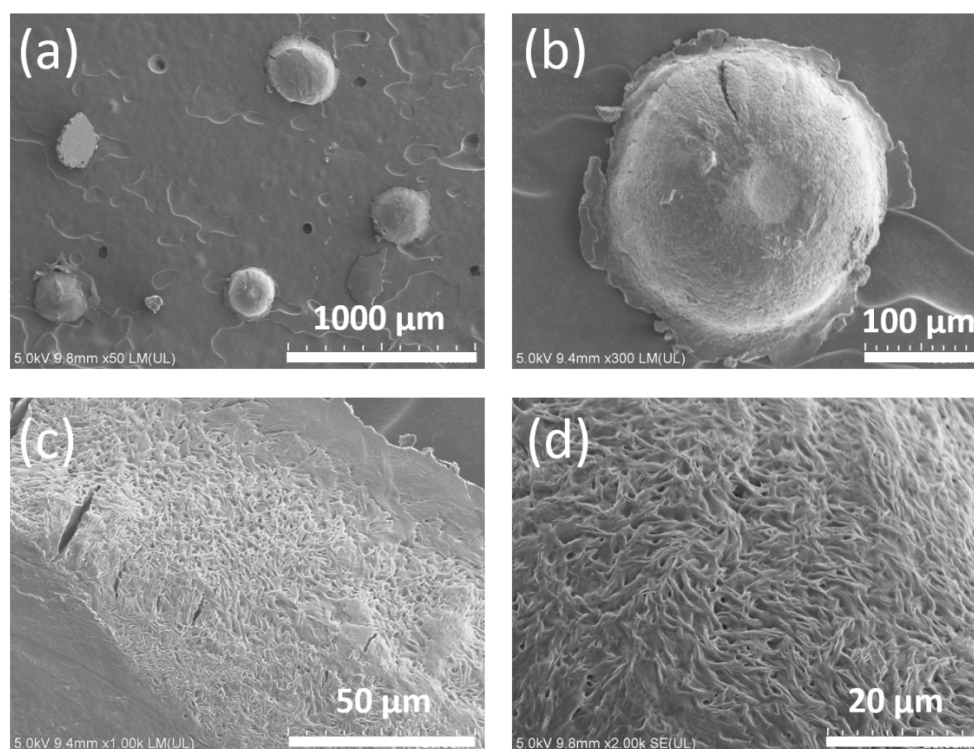


Fig. S3 SEM images of the freeze-dried L-gel with different magnifications. The scale bar is (a) 1000 μm , (b) 100 μm , (c) 50 μm , and (d) 20 μm .

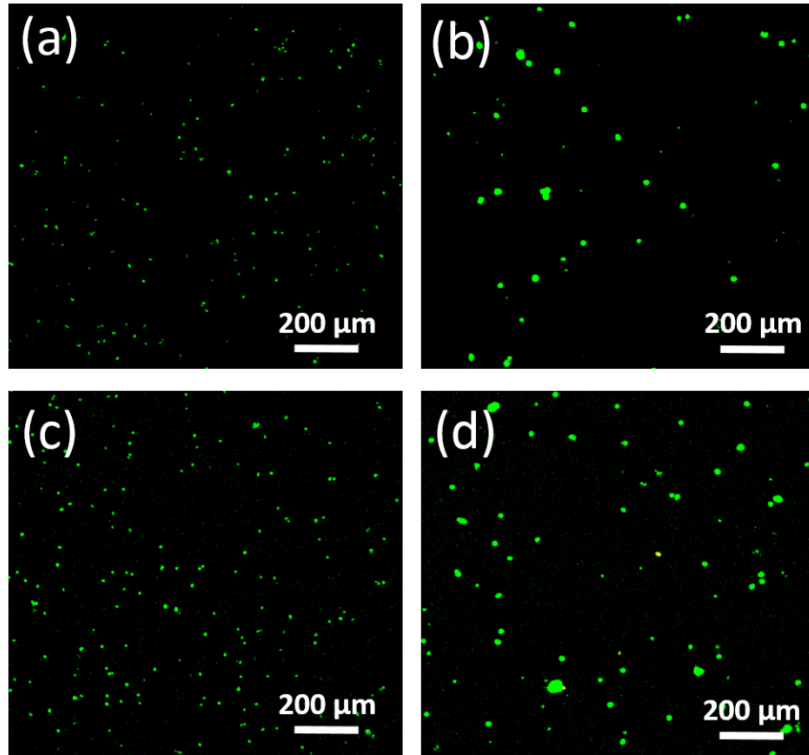


Fig. S4 BMSCs encapsulated in PEGDA hydrogel (a, c) and PEGS-M hydrogel (b, d) after culturing for 3 days (a, b) and 14 days (c, d). Live/Dead fluorescent viability assay stained living cells green and dead cells red.

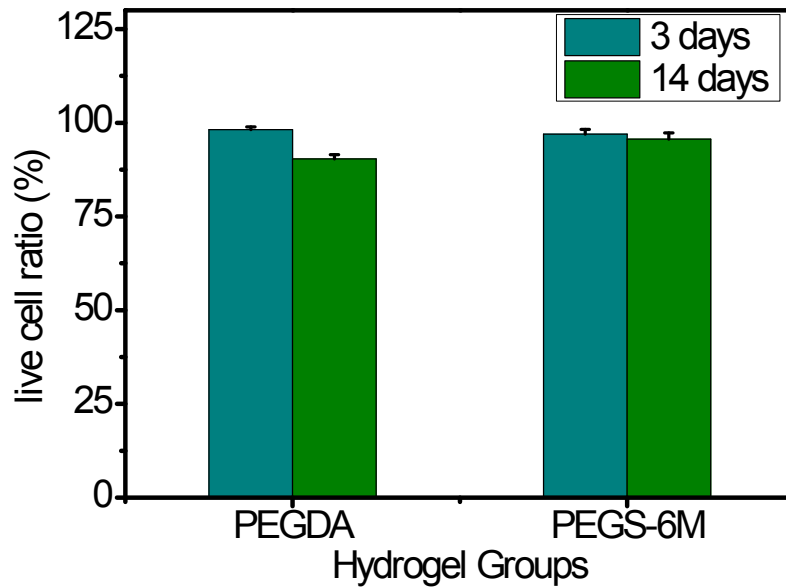


Fig. S5 The live/dead cell ratio of BMSCs encapsulated in PEGDA hydrogel and PEGS-M hydrogel after culturing for 3 days and 14 days, calculated from the results of live/dead assay.