Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

3D printed fibroblast-loaded hydrogel for scleral remodeling to prevent progression of myopia

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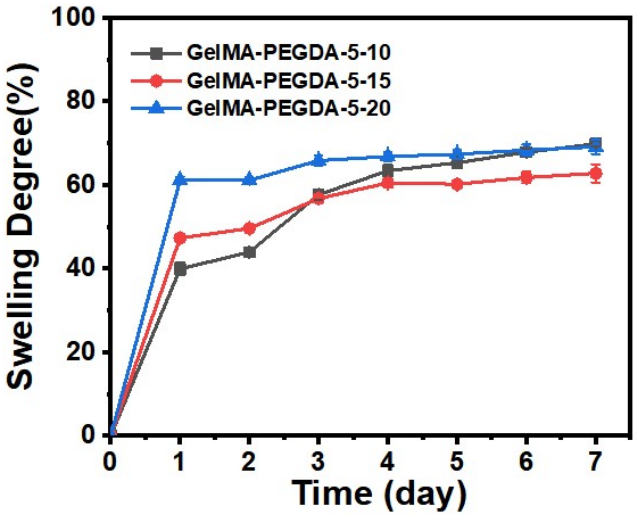

Fig. S1 The swelling degree of GelMA-PEGDA hydrogels after 7 days incubation in PBS at 37 °C.

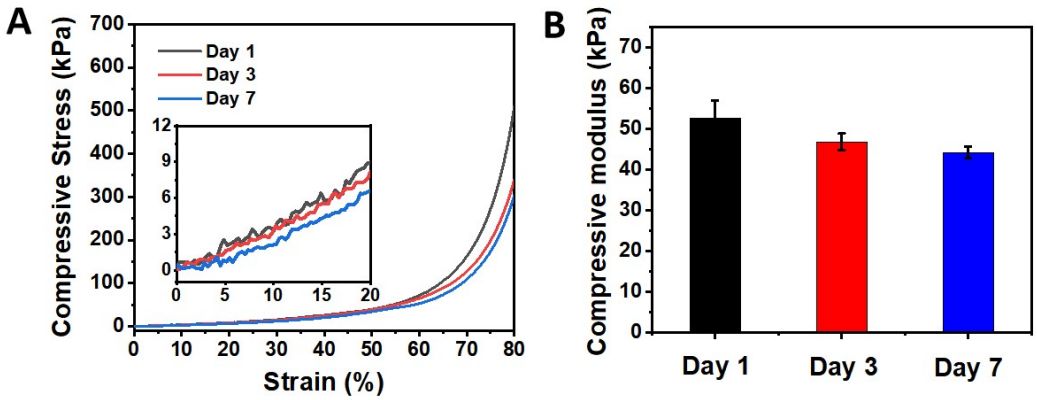

Fig. S2 (A) Compressive stress-strain curves and (B) compressive modulus of GelMA-PEGDA-5-20 hydrogel in PBS at 37 °C for 1, 3, 7 days.

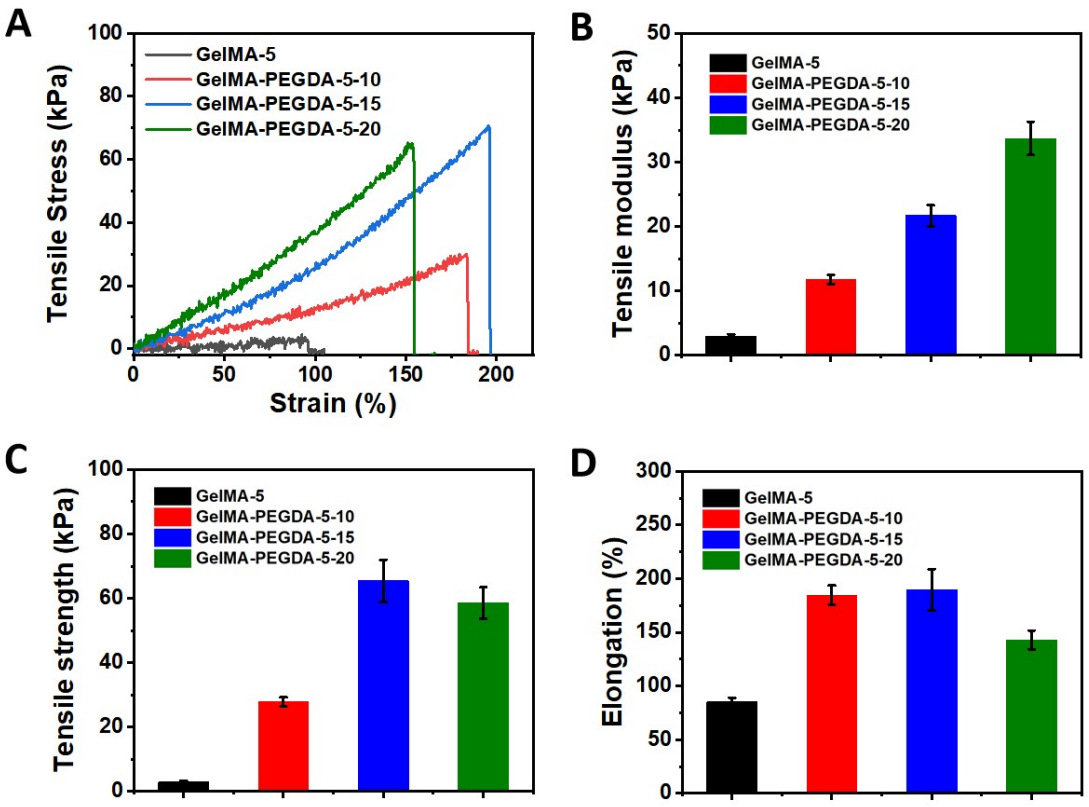

Fig. S3 (A) Tensile stress-strain curves, (B) tensile modulus, (C) tensile strength and (D) elongation at break of GelMA-PEGDA-5-20 hydrogel after 24-hours swelling in PBS at 37 °C.

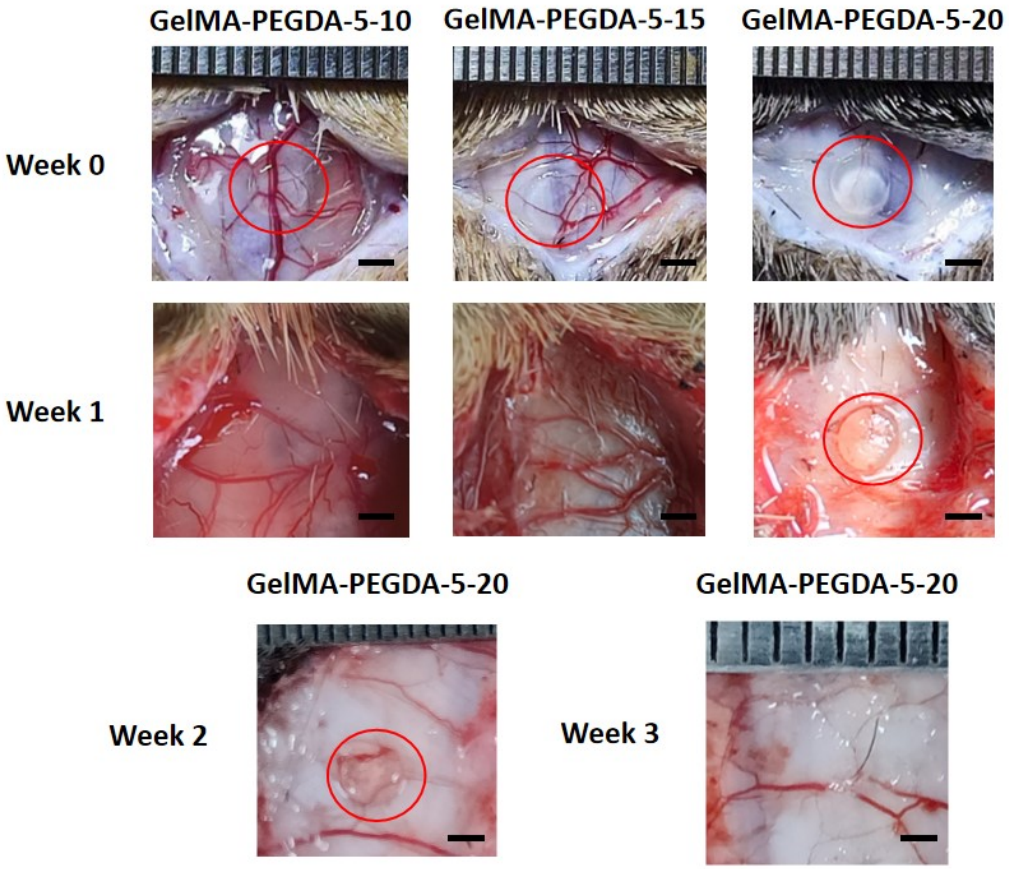

Fig. S4 Degradation behavior of GelMA-PEGDA hydrogels in guinea pig subcutaneous tissue. Bar: 1 mm.

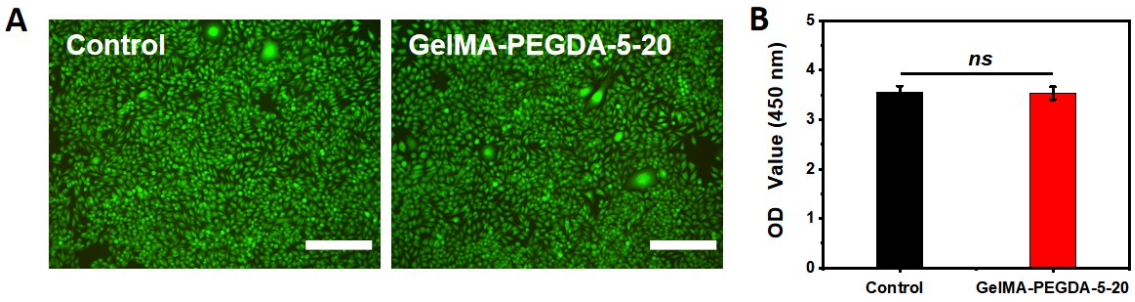

Fig. S5 Cytotoxicity assay of GelMA-PEGDA-5-20 hydrogel. (A) Live/dead images of fibroblasts treated with hydrogel and the control group. Scale bar: 250 μm. (B) OD values of CCK-8 assay of the control group and the hydrogel group.

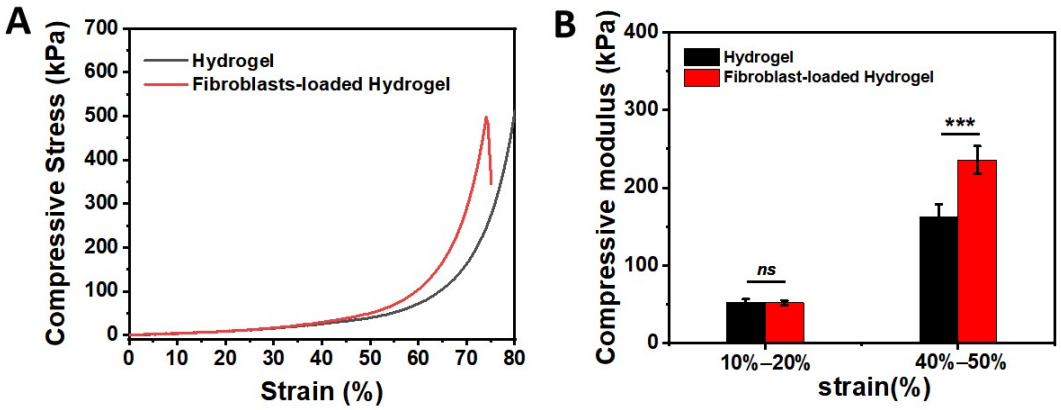

Fig. S6 (A) Compressive stress-strain curves and (B) compressive modulus of GelMA-PEGDA-5-20 hydrogel and fibroblasts-loaded GelMA-PEGDA-5-20 hydrogel after 24-hours swelling in PBS at 37 °C.

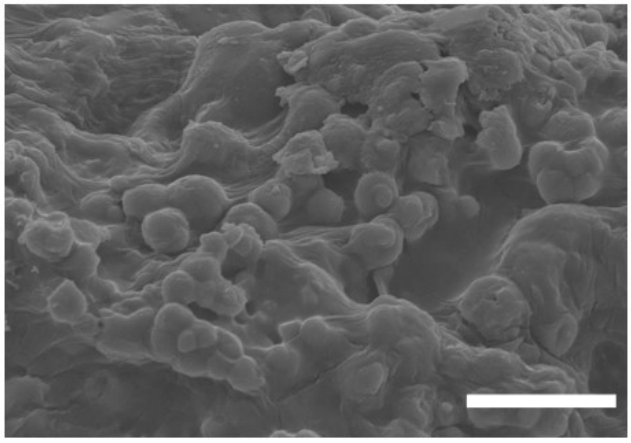

Fig. S7 SEM image of fibroblasts-loaded GelMA-PEGDA-5-20 hydrogel on Day 7. Scale bar: 10 μm.

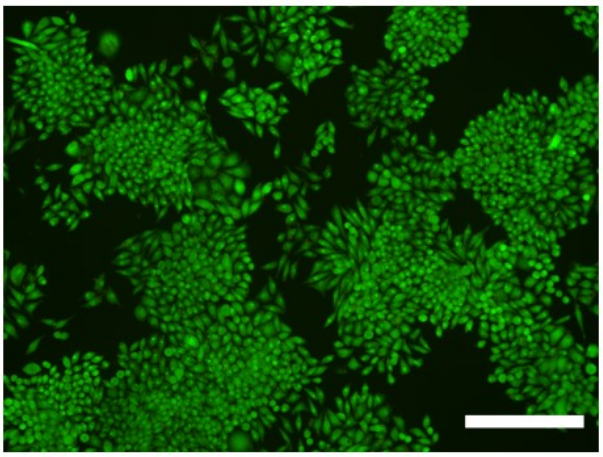

Fig. S8 Live/dead images of new cell colonies formed by proliferation of scattered fibroblasts from the fibroblasts-loaded GelMA-PEGDA-5-20 hydrogel on Day 7. Scale bar: 250 μm.

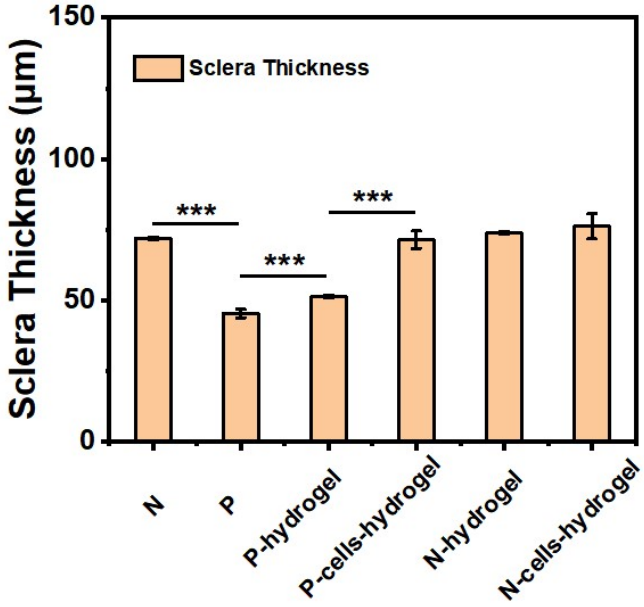

Fig. S9 Scleral thickness of guinea pigs in each group on week 2 calculated by hematoxylin and eosin staining.