

Supplementary materials:

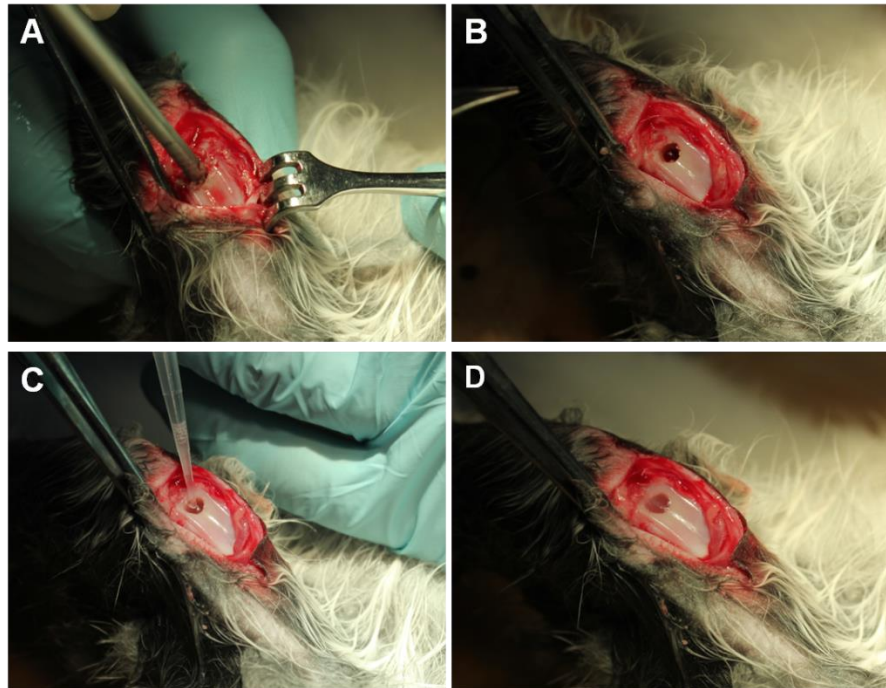


Figure S1. The surgery procedure stages for the establishment of osteochondral defect and HCF hydrogel implantation. (A, B) Osteochondral defect creation in a patello-femoral bone in the patella groove of a rabbit knee joint with a handle-operated drill. (C) Implantation of hydrogel into the osteochondral defect. (D) Implanted HCF hydrogel after gelation in the osteochondral defect.

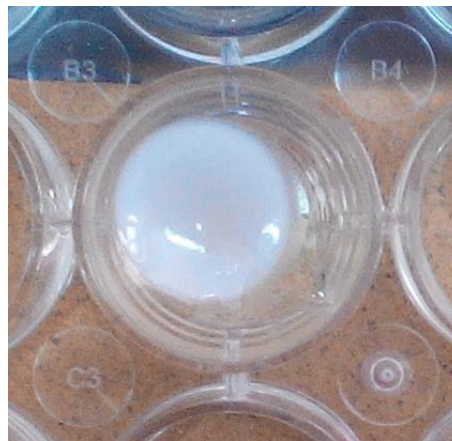


Figure S2. Representative image of gross appearance of HCF hydrogel after gelation

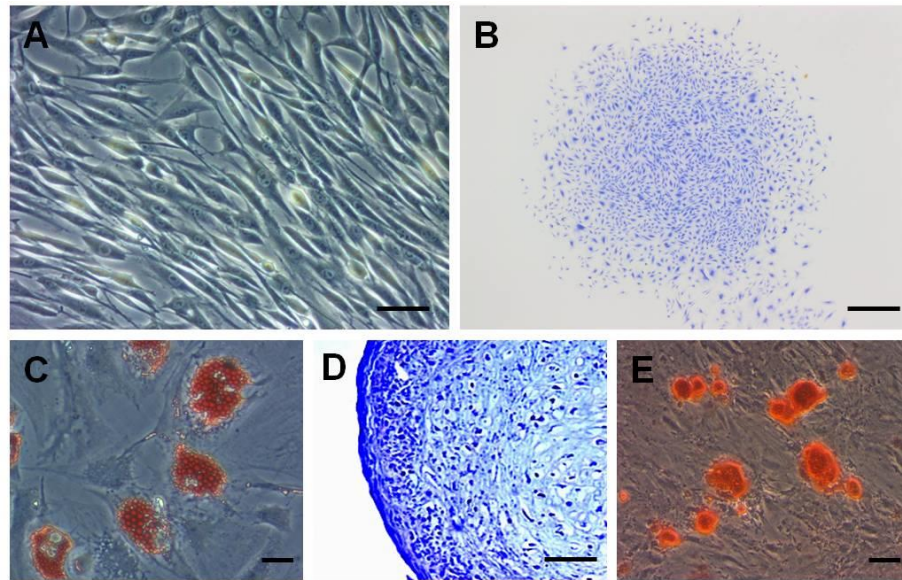


Figure S3. Characterization of rabbit SDMSCs. (A) Morphology of primary culture of rabbit SDMSCs. Phase-contrast image. Scale bar, 20 μm . (B) *Colony forming* ability of SDMSCs. Colonies were stained with crystal violet. Scale bar, 200 μm . (C) Adipogenic differentiation of SDMSCs. Adipocytes were stained with Oil Red O. Scale bar, 20 μm . (D) Chondrogenic differentiation of SDMSCs. Cross section of SDMSC pellet was stained with Toluidine blue. Scale bar, 50 μm . (E) Osteogenic differentiation of SDMSCs. Osteoblasts were stained with Alizarin Red S. Scale bar, 20 μm .