Electronic Supplementary Material (ESI) for RSC Advances


Supplementary Information

for

# A droplet-based microfluidic process to produce yarn-ball-shaped hydrogel microbeads

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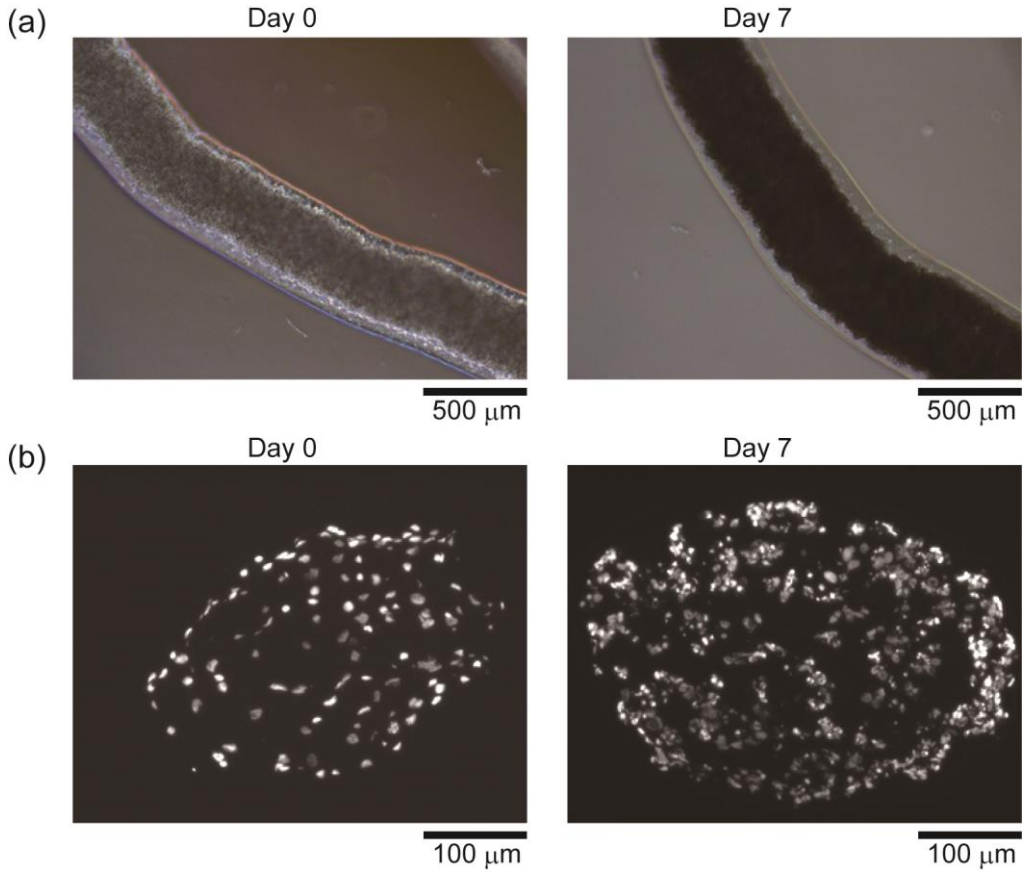


Figure S1. Cultivation of Hela cells in a homogeneous Ca-alginate hydrogel fiber as a control experiment. HeLa cells were suspended in 1% sodium alginate (NaA) solution at a concentration of $3 \times 10^7$ cells $mL^{-1}$. The cell suspension was extruded through a 27G syringe needle directly into a gelation solution (10% dextran solution with 20 mM $CaCl_2$). The hydrogel surface was coated with poly-L-lysine membrane as in the case of the yarn-ball-shaped beads. (a) Micrographs of HeLa cell-incorporating hydrogel fibers with an average diameter of ~450 μm, after 0 and 7 days of cultivation. (b) Fluorescence images showing the cross sections of the cell-incorporating hydrogel fiber, before and after cultivation for 7 days. Frozen sections (5 μm thickness) were prepared by using a cryostat, and the cell nuclei were stained by 4',6-diamidino-2-phenylindole (DAPI). The cell density after 7 days of cultivation was increased ~3.1-fold, which was measured by counting the cells in 10 sections.