ACCSCIENCE PUBLISHING

International Journal of Bioprinting

RESEARCH ARTICLE

3D-bioprinted osteochondral model based on hierarchical polymeric microarchitectures for *in vitro* osteoarthritis drug screening

Supplementary file

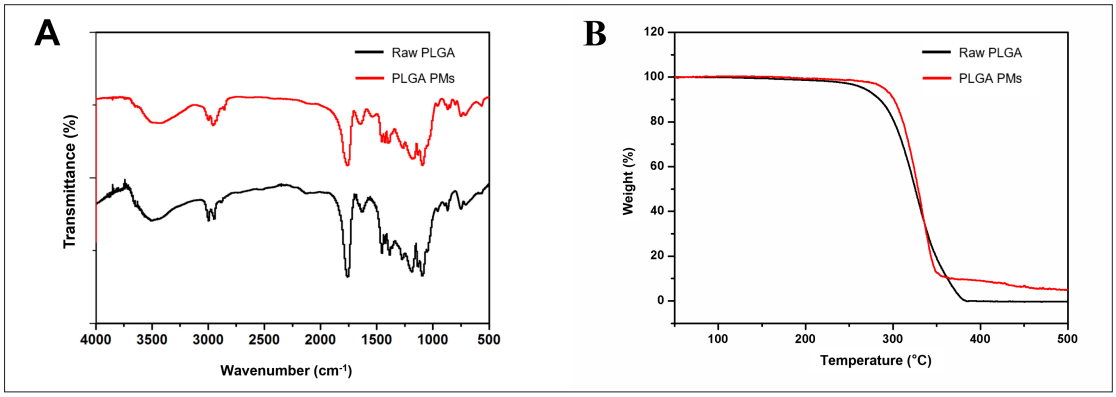

Figure S1. Characterization of the poly(lactic-co-glycolic) acid (PLGA)-based polymeric microarchitecture (PM). (A) Fourier transform infrared spectra. (B) Thermogravimetric analysis spectra.

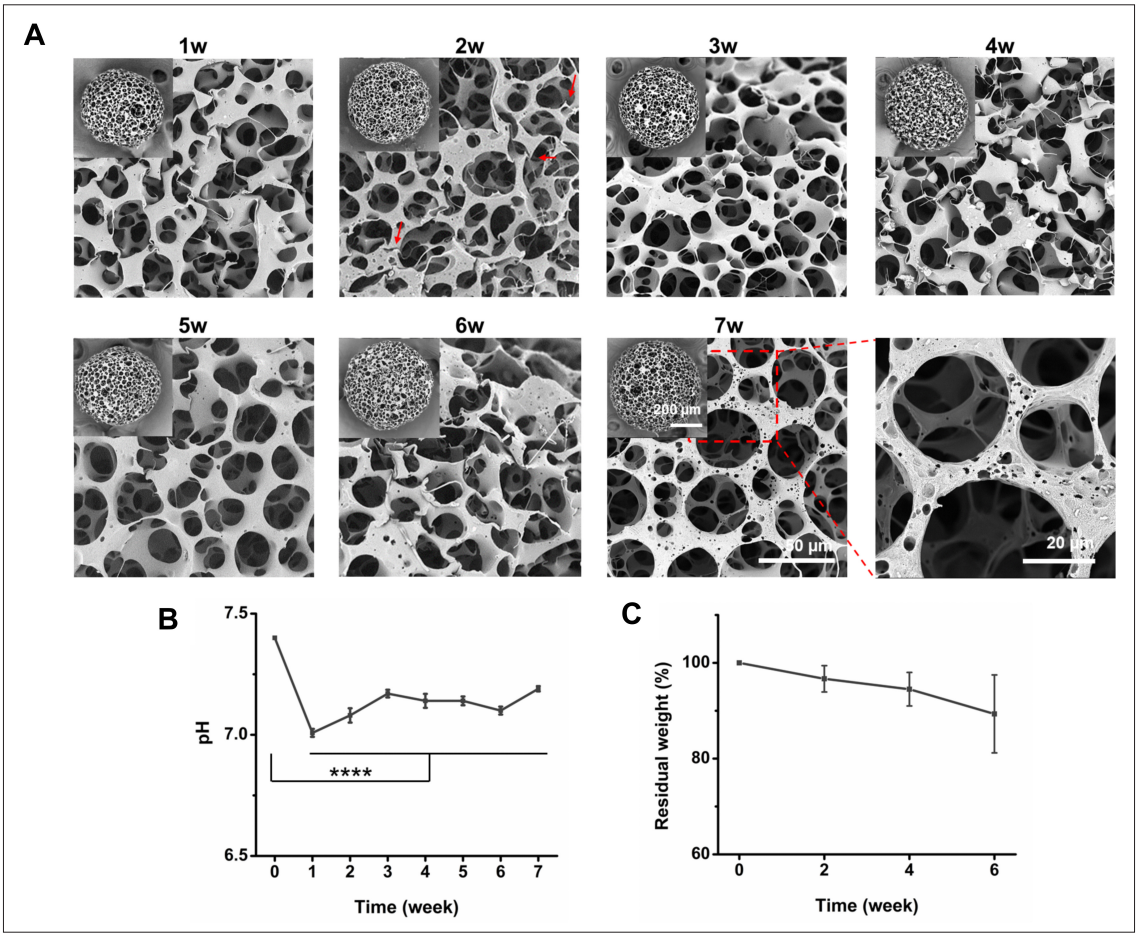

Figure S2. (A) Scanning electron microscopy images presenting the degradation of polymeric microarchitectures in phosphate-buffered saline (PBS; pH 7.4) *in vitro*. Scale bars: 200, 50, or 20 μm; magnifications: 400×, 700×, 1000×. (B) The pH value of the PBS over time. (C) Weight loss ratio over time.

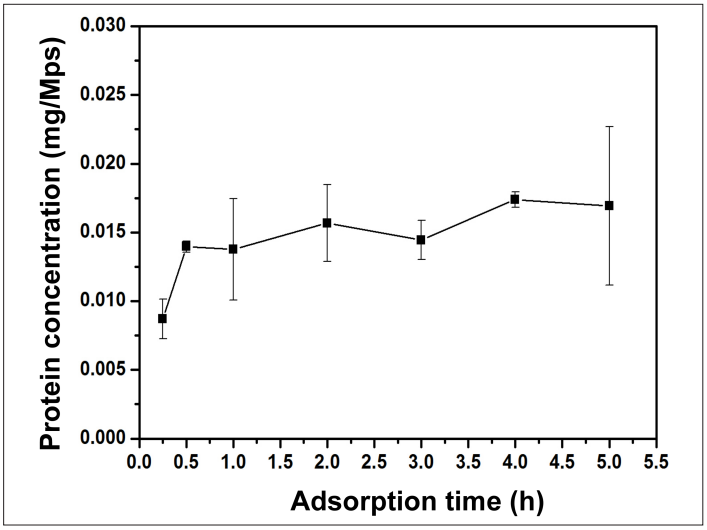

Figure S3. The kinetic curve of protein adsorbed on polymeric microarchitectures.

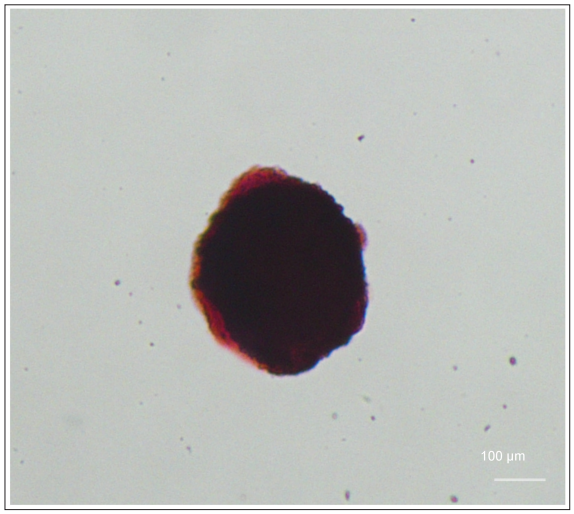

Figure S4. Alizarin Red S staining of endothelial osteoblastic microtissues at 14 days of osteogenic induction culture. Scale bar: 100 μm; magnification: 40×.

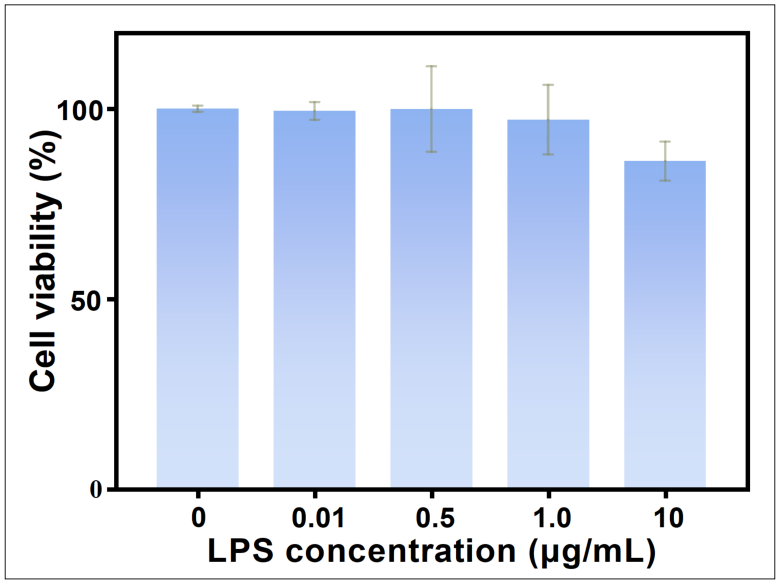

Figure S5. Viability of cells treated with different concentrations of lipopolysaccharide (LPS) over 48 h.

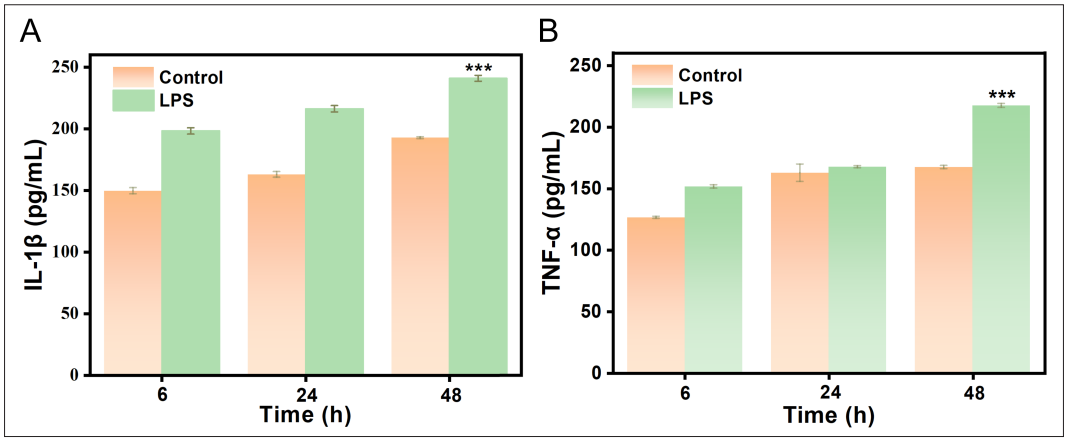

Figure S6. (A) Interleukin (IL)-1β and (B) tumor necrosis factor-alpha (TNF-α) concentrations induced by lipopolysaccharide (LPS), measured at 6, 24, and 48 h post-induction in the osteoarthritis model ($n = 3$). Note: ***$p < 0.001$.

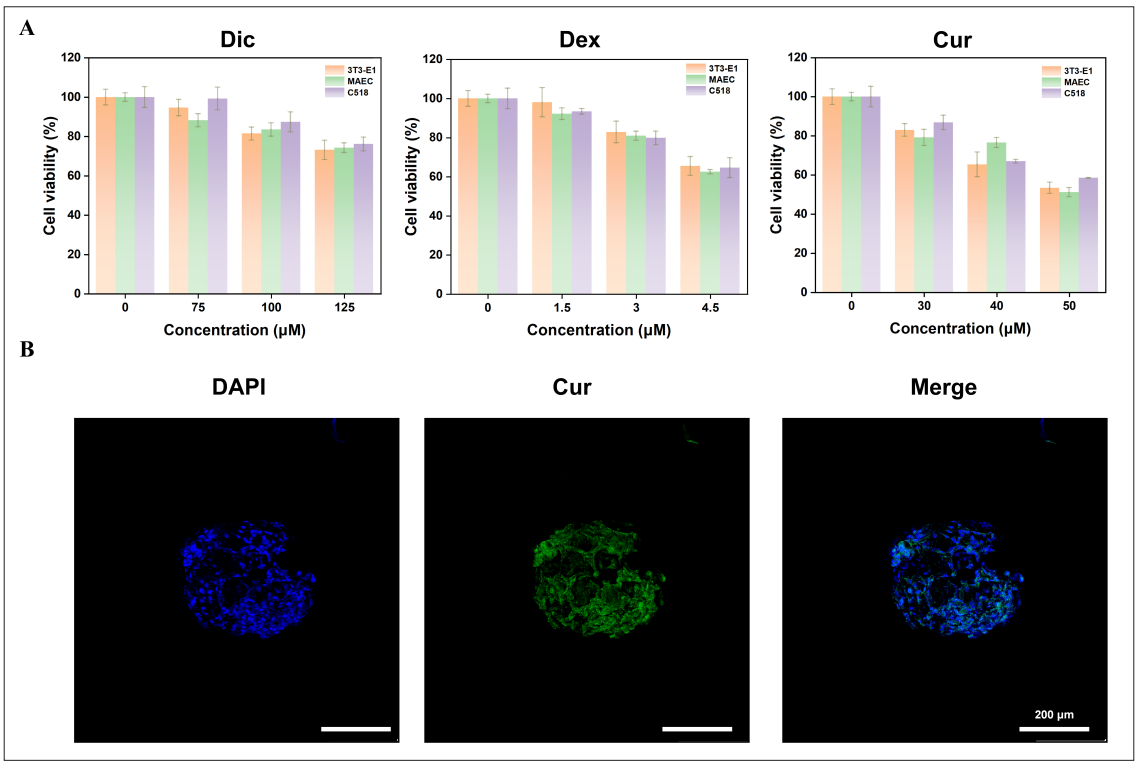

Figure S7. (A) Viability of cells treated with different concentrations of diclofenac (Dic), dexamethasone (Dex), or curcumin (Cur) for 48 h. (B) Cellular uptake in microtissues treated with Cur for 4 h. Scale bar: 200 μm; magnification: 40×.