Supplemental data

Preparation of Poly(γ-glutamic acid)/Hydroxyapatite Monolith *via* Biomineralization for Bone Tissue Engineering

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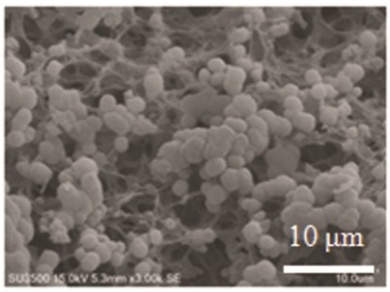

Figure S1. SEM image of the PGA monolith after soaking in SBF for 30 d.

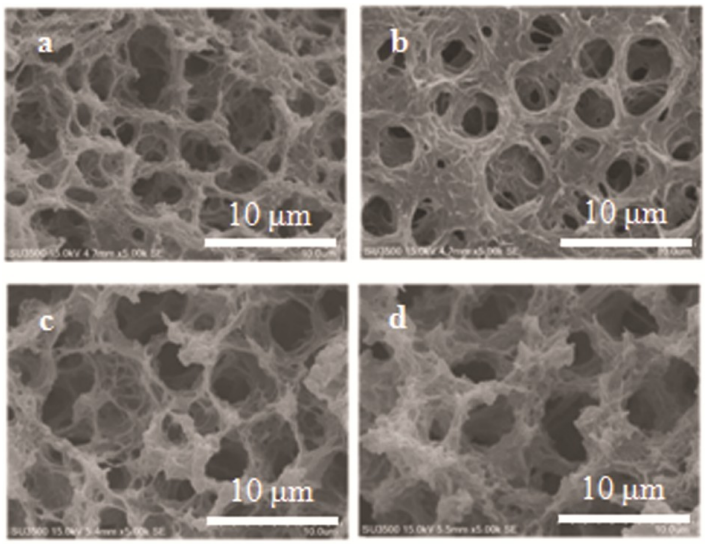

Figure S2. SEM images of the monoliths a) before $CaCl_2$ treatment and after b) 0.01 M $CaCl_2$, c) 0.1 M $CaCl_2$, and d) 1 M $CaCl_2$ treatment.

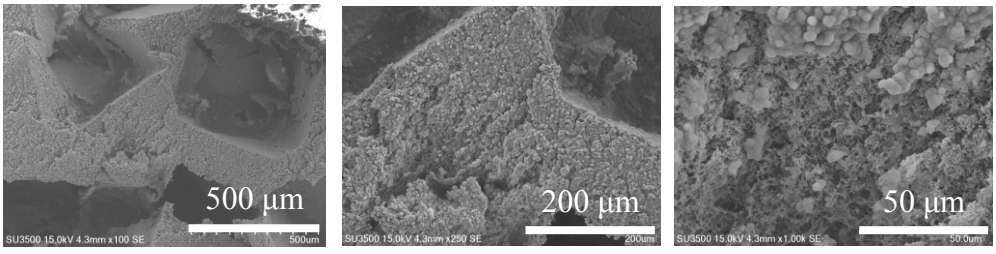

Figure S3. SEM images of the PGA monolith after treatment with 1 M $CaCl_2$ and immersion in SBF for 7 d.

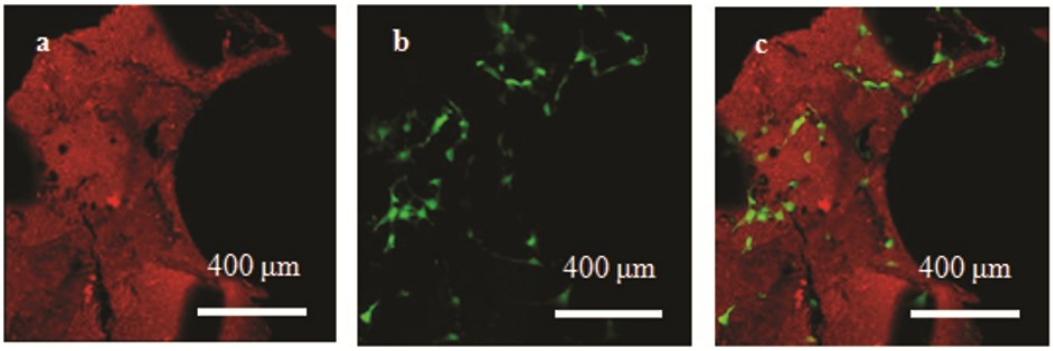

Figure S4. CLSFM images of a) Rhodamine-labeled PGA monolith, b) MC3T3-E1 cells on the PGA monolith, and c) the overlay of both. Green fluorescence: live cells; red fluorescence: PGA monolith.

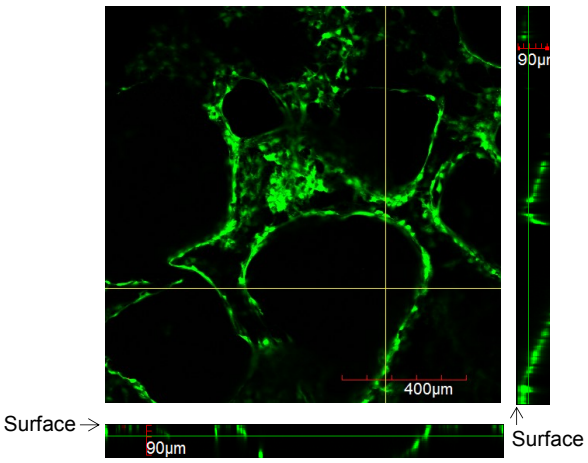

Figure S5. Three-dimensional CLSFM image of MC3T3-E1 cells within the PGA/HAp monolith. Cells were stained using live/dead assay kit. Green: live cells, Red: dead cells.

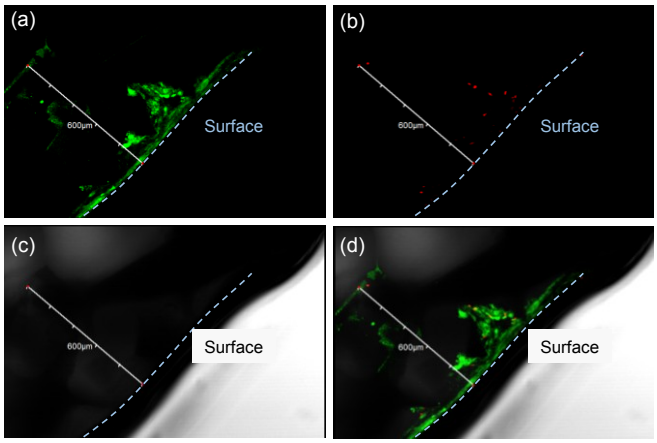

Figure S6. CLSFM image of MC3T3-E1 within the cross-section of the PGA/HAp monolith after 3 weeks of culture. After staining cells using live/dead assay kit, the PGA/HAp monolith was cut vertically to the surface and the cross-section was observed by CLSFM. a) live cells, b) dead cells, c) phase contrast, d) merge. Scale bars: 600 μm

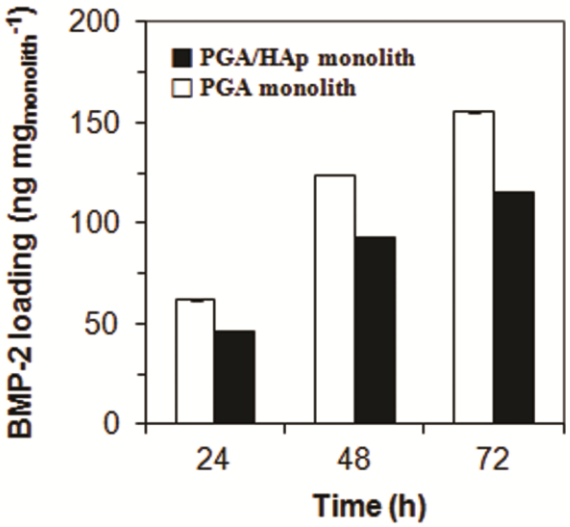

Figure S7. BMP-2 loading capacity of the monoliths. Sample size: diameter 6 mm × thickness 1 mm; sample weight: PGA monolith (3.2 mg) and PGA/HAp monolith (4.3 mg). (n = 3)

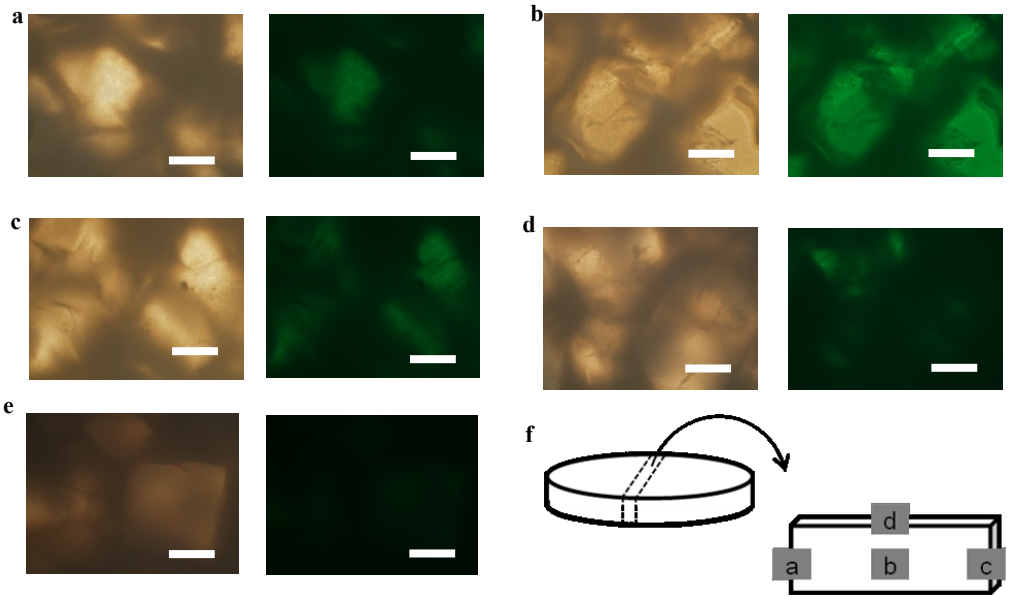

Figure S8. Fluorescence images of the PGA/HAp monolith loaded with/without BMP-2 after staining with fluorescamine. a-d) BMP-2 loaded PGA/HAp monolith, e) non-treated PGA/HAp monolith. Left: bright field. Right: fluorescence. Scale bars: 100 μm. f) the observed positions of the BMP-2 loaded PGA/HAp monolith.