

Supplementary Data

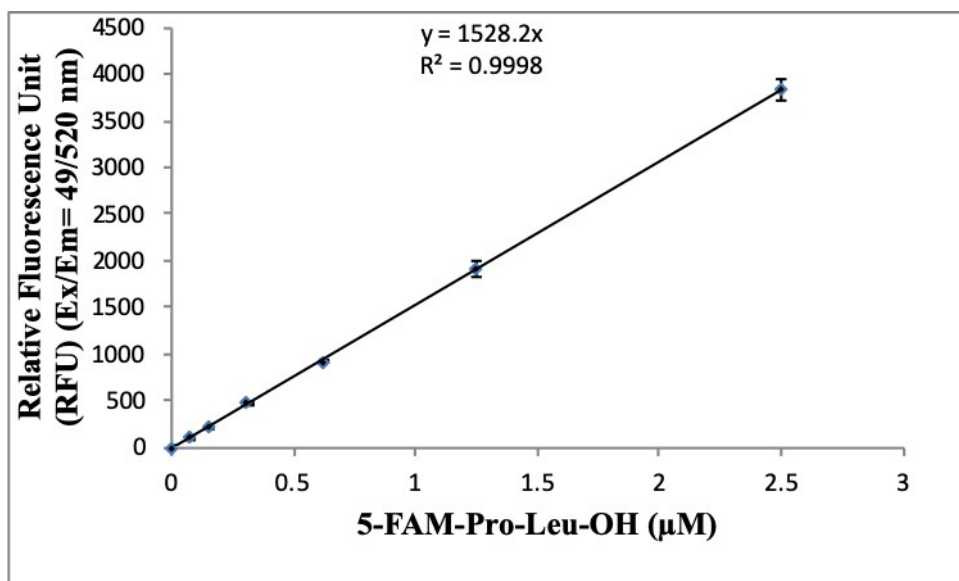


Figure S1: Calibration curve for MMP activity using 5-FAM-Pro-Leu-OH as substrate.

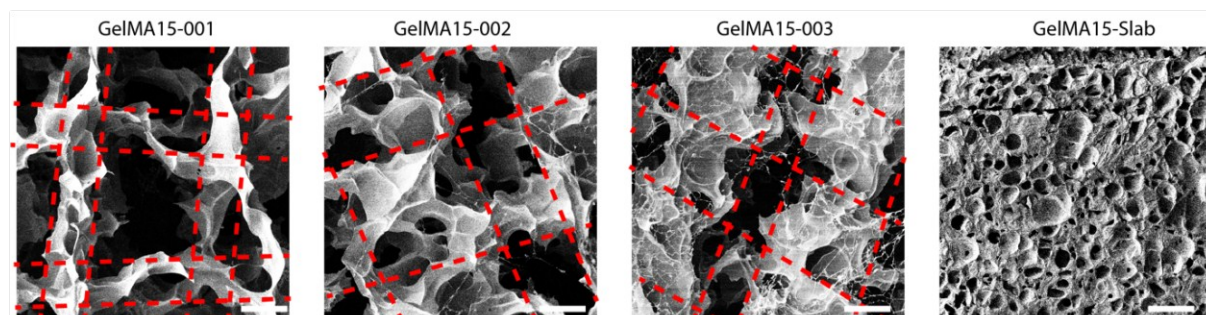


Figure S2: SEM micrographs of 3D printed and slab GelMA hydrogels in lyophilized form. Red dotted lines are the outlines of the printed GelMA. Scale bar: 250 µm.

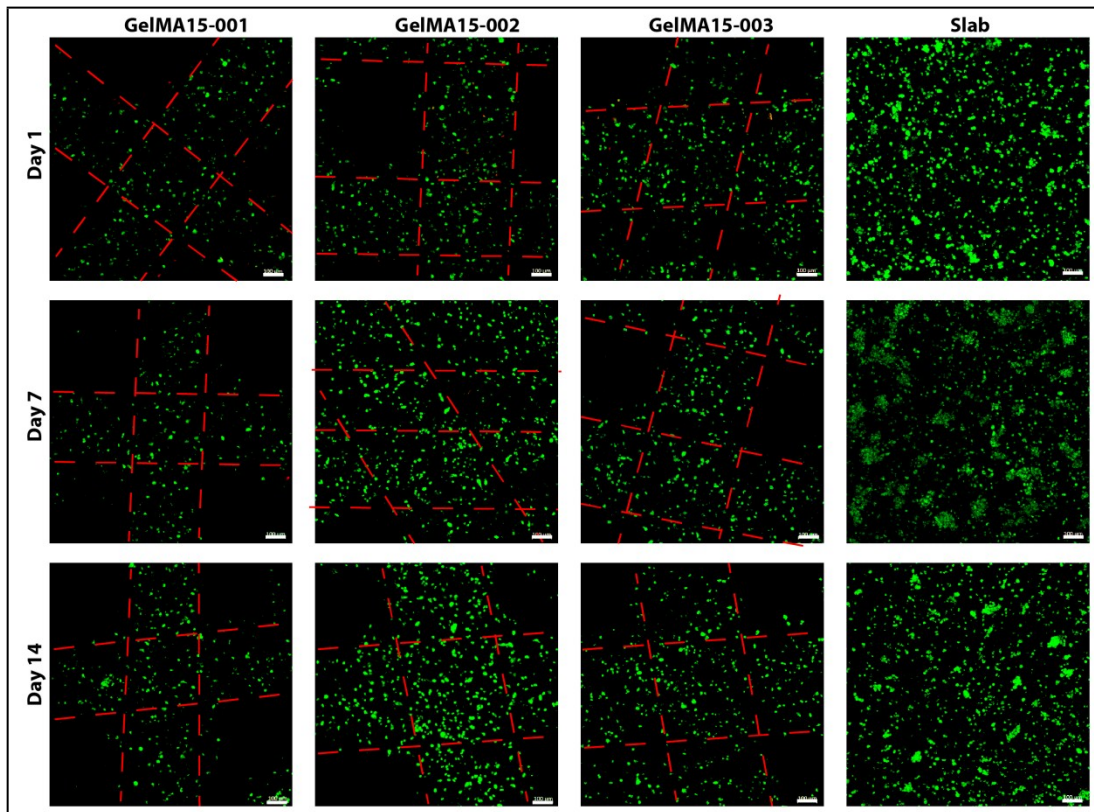


Figure S3: CLSM images showing results of Live-Dead Cell Viability Assay of 3D printed and slab GelMA hydrogels on Day 1, 7, and 14. A) Live-Dead assay with red showing dead (ethidium homodimer-1) and green showing live cells (calcein). Scale bars: 100 μm . Dotted red lines indicate the fiber borders.

Table S1: Transmittance (%) (at 300 and 700 nm) of cell loaded (w/ cells) and cell free (w/o cells) 3D printed hydrogels and also slab hydrogels for upto 21 days of incubation.

Wavelength (nm)	Time (Days)	GelMA15-001		GelMA15-002		GelMA15-003		GelMA15-Slab	
		w cells	w/o cells	w cells	w/o cells	w cells	w/o cells	w cells	w/o cells
300	1	20.2	29.3	19.3	17.1	17.2	5.1	0.1	2.0
	7	18.8	11.3	4.1	19.7	22.4	9.7	4.0	0.6
	14	17.9	17.9	10.1	5.0	9.9	14.4	1.5	0.5
	21	19.2	37.0	10.7	5.4	12.0	16.7	6.0	3.8
700	1	86.7	92.9	89.2	89.4	88.6	87.5	75.3	91.4
	7	90.5	88.4	84.9	90.4	91.2	87.8	80.3	79.9
	14	90.5	90.5	84.8	88.3	86.7	92.0	81.7	79.4
	21	88.2	90.9	84.3	83.7	83.9	88.5	83.0	79.0