

Supplementary Information

Stable biofunctionalization of hydroxyapatite (HA) surfaces by HA-binding/osteogenic modular peptides for inducing osteogenic differentiation of mesenchymal stem cells

Alessandro Polini,^{a,†,} Jianglin Wang,^b Hao Bai,^a Ye Zhu,^b Antoni P. Tomsia,^a Chuanbin Mao^{a,b*}*

^a Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA

^b Department of Chemistry and Biochemistry, Stephenson Life Sciences Research Center, University of Oklahoma, Norman, OK 73019, USA

[†] Present Address: Dept. of Biomaterials, Radboud University Nijmegen Medical Centre, 6525 EX Nijmegen, Netherlands

E-mail address: alessandro.polini@radboudumc.nl (AP), cbmao@ou.edu (CM).

Gene	Sequence of primer	Length of fragment
ALP	5'-GTGCCCTGACTGAGGGCTGTC-3' 5'-GGATCATCGTGTCCCTGCTCAC-3'	80bp
OCN	5'-AAAGCCCAGCGACTCT-3' 5'-CTAACCGGTGGTGCCATAGAT-3'	232bp
OPN	5'-GACGGCCGAGGTGATAGCTT-3' 5'-CATGGCTGGTCTTCCCGTTGC-3'	209bp
Runx2	5'-GCTTCTCCAACCCACGAATG-3' 5'-GAACTGATAGGACGCTGACGA-3'	213bp
Arbp	5'-CGACCTGGAAGTCCAAC TAC-3' 5'-ATCTGCTGCATCTGCTTG-3'	109bp

Table S1. Primer sequences for Real-time PCR analysis.

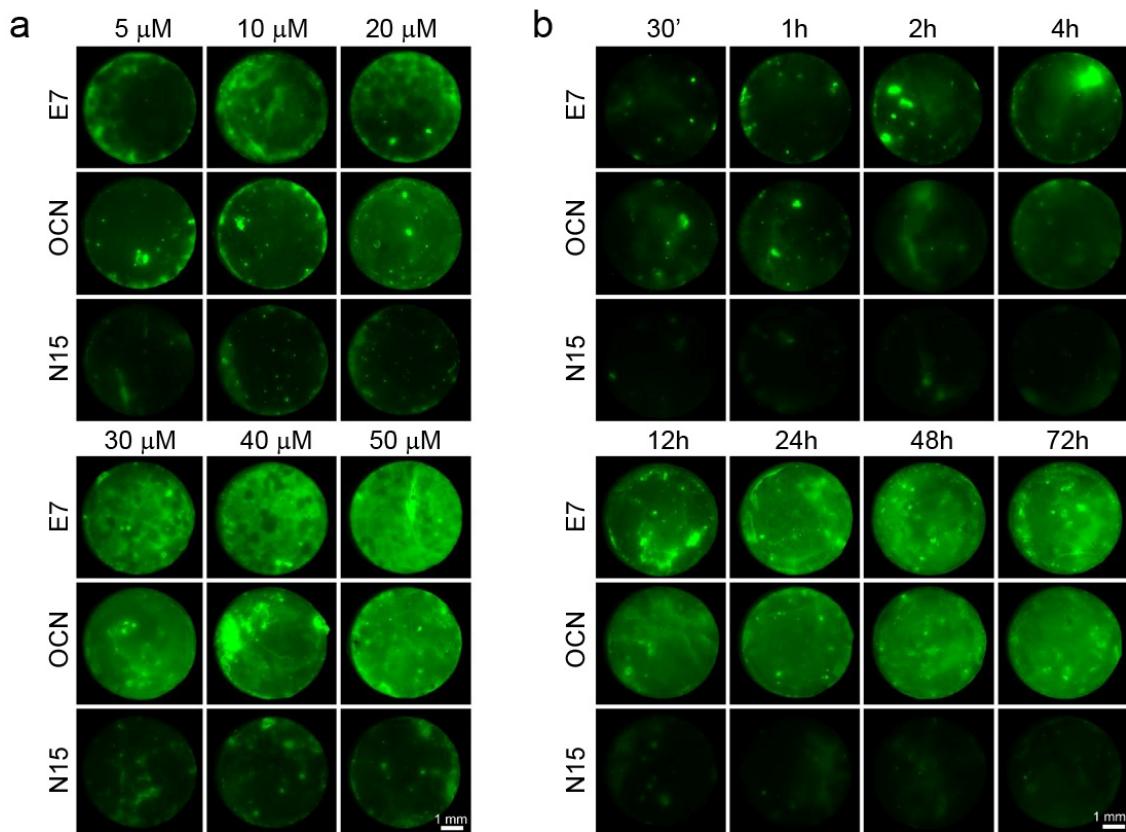


Fig. S1. HA discs functionalized with FITC-labeled HA-binding peptides at different concentrations (a) and incubation times (b).

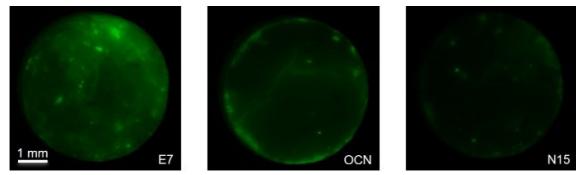


Fig. S2. Fluorescent images of HA discs functionalized with FITC-labeled HA-binding peptides after the release test (1 month).

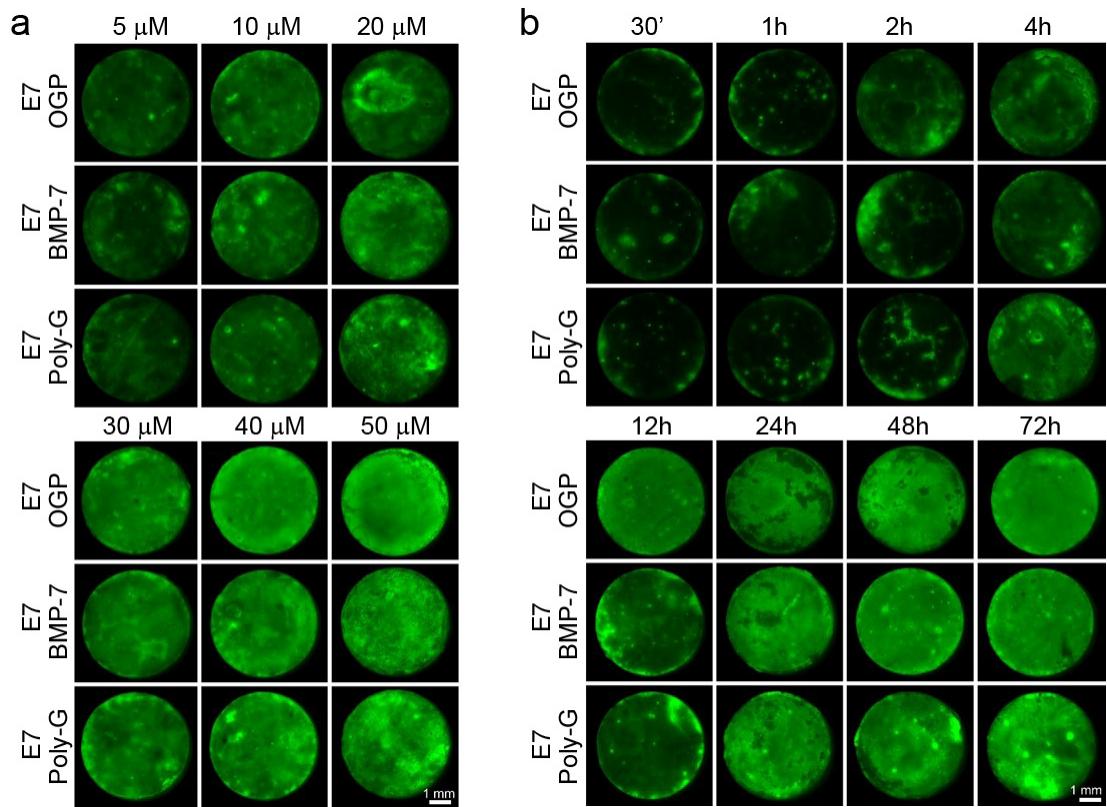


Fig. S3. HA discs functionalized with FITC-labeled modular peptides at different concentrations (a) and incubation times (b).

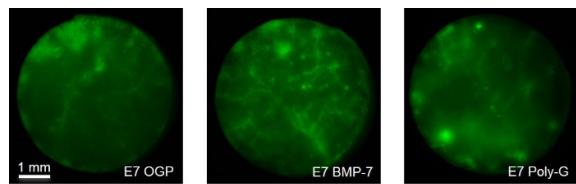


Fig. S4. Fluorescent images of HA discs functionalized with FITC-labeled modular peptides after the release test (1 month).