

Supporting Information

Clay-based nanocomposite hydrogel with attractive mechanical properties and sustained bioactive ions release for bone defect repair

Xinyun Zhai,^{a,b,c} Changshun Ruan,^{*c} Jie Shen,^d Chuping Zheng,^e Xiaoli Zhao,^c Haobo Pan^{*c} and William Weijia Lu^{*b,c}

^aTianjin Key Laboratory for Rare Earth Materials and Applications, Center for Rare Earth and Inorganic Functional Materials, School of Materials Science and Engineering, National Institute for Advanced Materials, Nankai University, Tianjin 300350, China

^bDepartment of Orthopaedic and Traumatology, The University of Hong Kong, 21 Sassoon Road, Pokfulam, Hong Kong, China

^cResearch Center for Human Tissue and Organs Degeneration, Institute Biomedical and Biotechnology, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen 518055, China

^dShenzhen Engineering Laboratory of Orthopaedic Regenerative Technologies, Orthopaedic Research Center, Peking University Shenzhen Hospital, Shenzhen 518036, China

^eKey Laboratory of Molecular Target & Clinical Pharmacology and the State Key Laboratory of Respiratory Disease Pharmacological Group, School of Pharmaceutical Sciences & the Fifth Affiliated Hospital, Guangzhou Medical University, Guangzhou, Guangdong 511436, China

Corresponding author: wwlu@hku.hk, hb.pan@siat.ac.cn, cs.ruan@siat.ac.cn

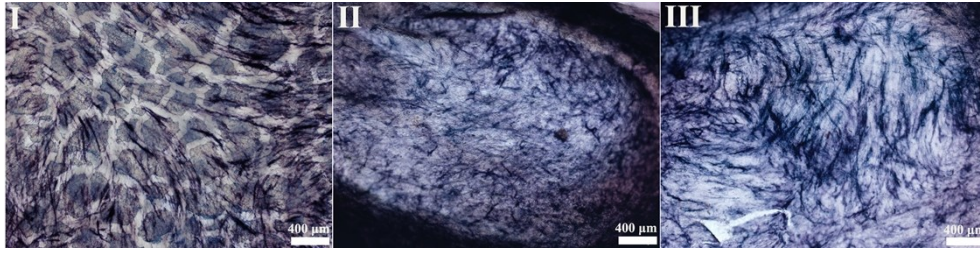


Figure S1. ALP analysis of ROBs after seeded on poly(4-Acry)-Clay nanocomposite hydrogels for 21 days. (I): 3%-30%, (II): 5%-30%, (III): 7%-30% (40×).

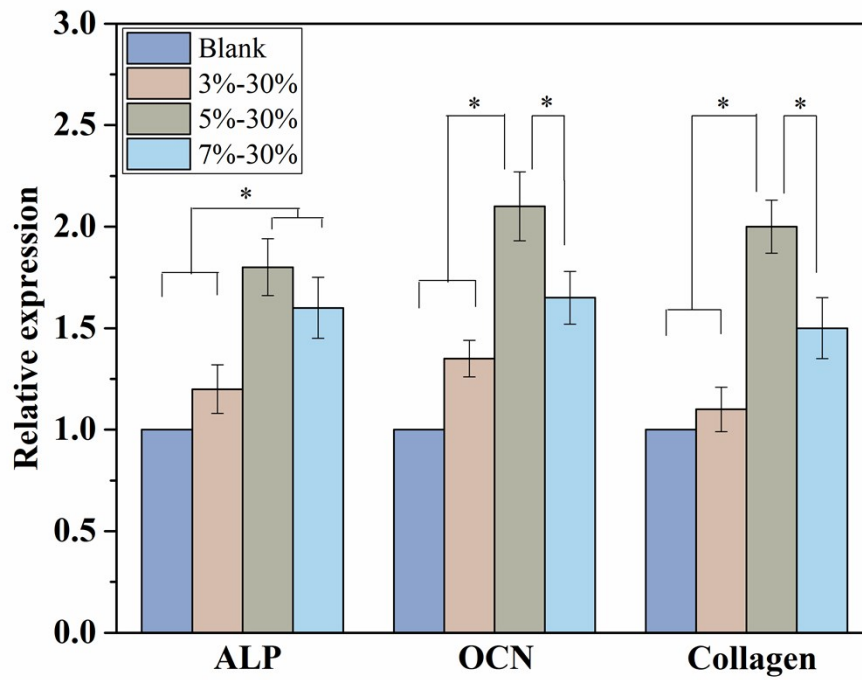


Figure S2. Osteogenic gene expression (ALP, OCN and collagen I) of ROBs after seeded on X%-30% poly(4-Acry)-Clay nanocomposite hydrogels at day 7. Asterisks (*) denote significant differences (* $p < 0.05$).