Calcium supplement by tetracycline guided amorphous calcium carbonate potentiates osteoblast promotion for synergetic osteoporosis therapy

Jianwei Wang ^{b, 1}, Shan Tao ^{a, 1}, Xiangyu Jin ^a, Yanqing Song ^a, Wentao Zhou ^a, Haiya Lou ^c, Rui Zhao ^c, Cheng Wang ^{a,d, *}, Fuqiang Hu ^a, Hong Yuan ^{a, *}

^a College of Pharmaceutical Science, Zhejiang University, 866 Yuhangtang Road, Hangzhou, 310058, China

^b The Second Affiliated Hospital, School of Medicine, Zhejiang University, No. 88 Jiefang Road, Hangzhou, 310009, China

^c Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, No. 3 Qingchun East Road, Hangzhou, 310016, China

^d School of Pharmaceutical Engineering & Life Science, Changzhou University, Changzhou, 213164, China

^{*} Corresponding author. E-mail: 11519016@zju.edu.cn; yuanhong70@zju.edu.cn;

¹ These authors contributed equally to this work.

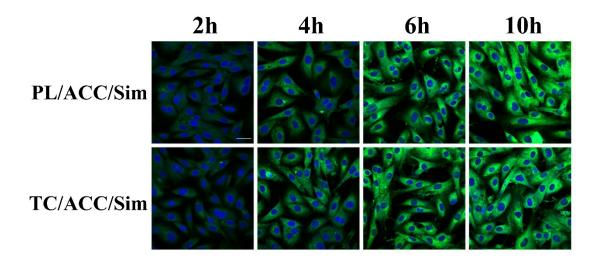


Figure S1. In vitro cellular uptake of PL/ACC/Sim and Tc/ACC/Sim. Scale bar = 30 $\,\mu m$.

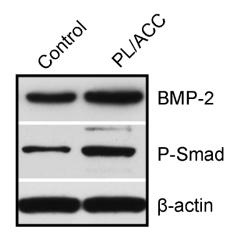


Figure S2. Western blot assay of BMP-Smad promotion efficacy of PL/ACC.

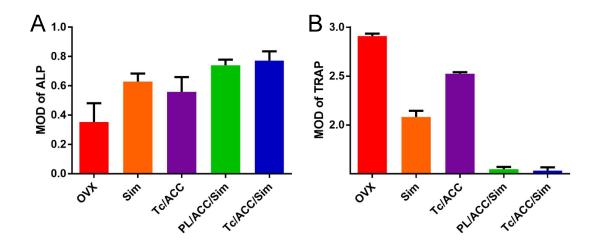


Figure S3. The calculated mean optical density (MOD) of ALP (A) and TRAP (B) corresponding to results in Figure 9. Results were expressed as mean \pm S.D. (n = 3).

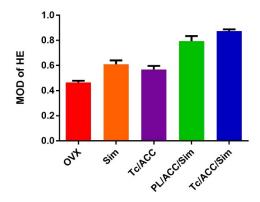


Figure S4. The calculated MOD of HE corresponding to results in Figure 10. Results were expressed as mean \pm S.D. (n = 3).

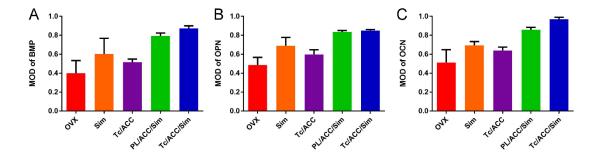


Figure S5. The calculated MOD of BMP-2 (A), OPN (B) and OCN (C) corresponding to results in Figure 11. Results were expressed as mean \pm S.D. (n = 3).