

Supporting Information

Title: Polydopamine-assisted Hydroxyapatite and Lactoferrin Multilayer on Titanium for Regulating Bone Balance and Enhancing Antibacterial Property

Authors: Tingting Shen, Weihu Yang, Xinkun Shen, Weizhen Chen, Bailong Tao, Xiaoqing Yang, Jianping Yuan, Peng Liu, Kaiyong Cai

The number of pages: 5

The number of figures: 5

The number of tables: 1

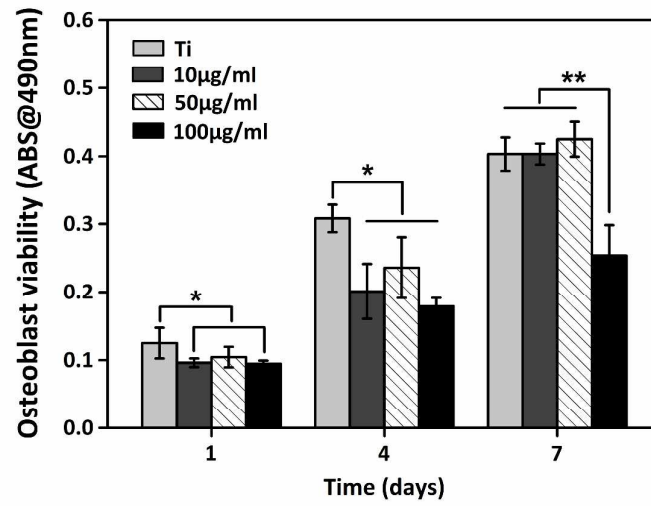


Figure S1. Osteoblast activity on Ti and multilayer films with 10, 50 and 100µg/ml lactoferrin after cultured for 1, 4 and 7 d (n = 6), *p < 0.05, **p < 0.01.

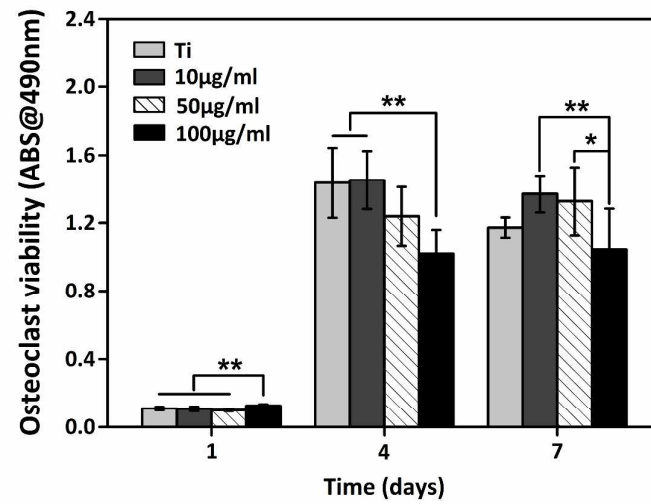


Figure S2. Osteoclast activity on Ti and multilayer films with 10, 50 and 100µg/ml lactoferrin after cultured for 1, 4 and 7 d (n = 6), *p < 0.05, **p < 0.01.

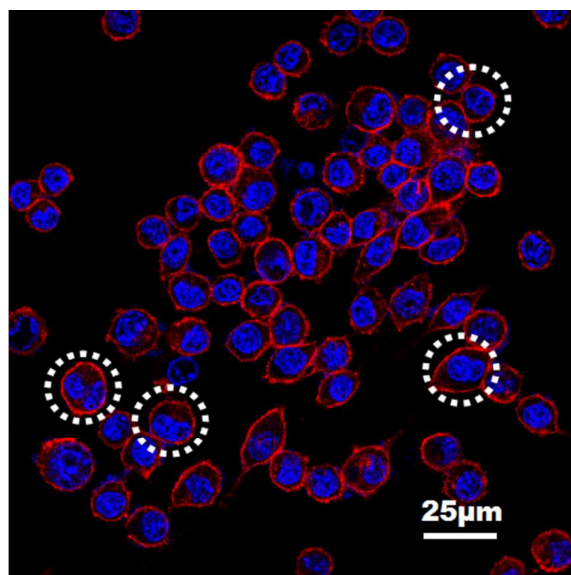


Figure S3. Representative fluorescence images of RAW264.7 cells cultured in the presence of RANKL (50 ng mL^{-1}) and m-CSF (20 ng mL^{-1}), white circles represent multinucleate osteoclasts.

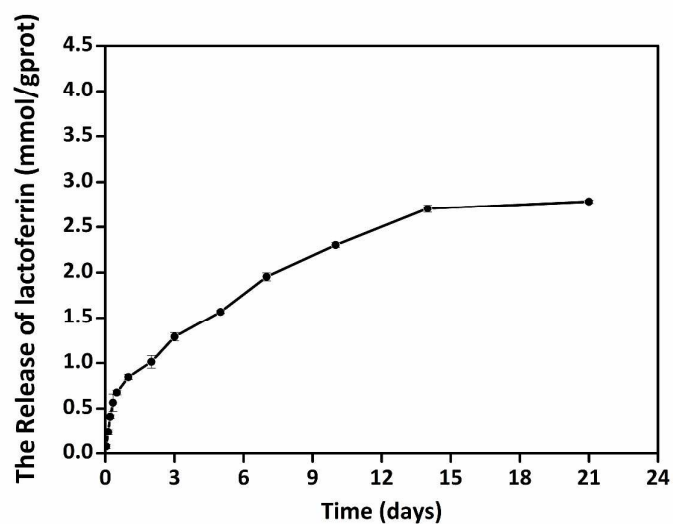


Figure S4. LF release from multilayer films in SBF solution (pH 7.4) with immersion for different time intervals.

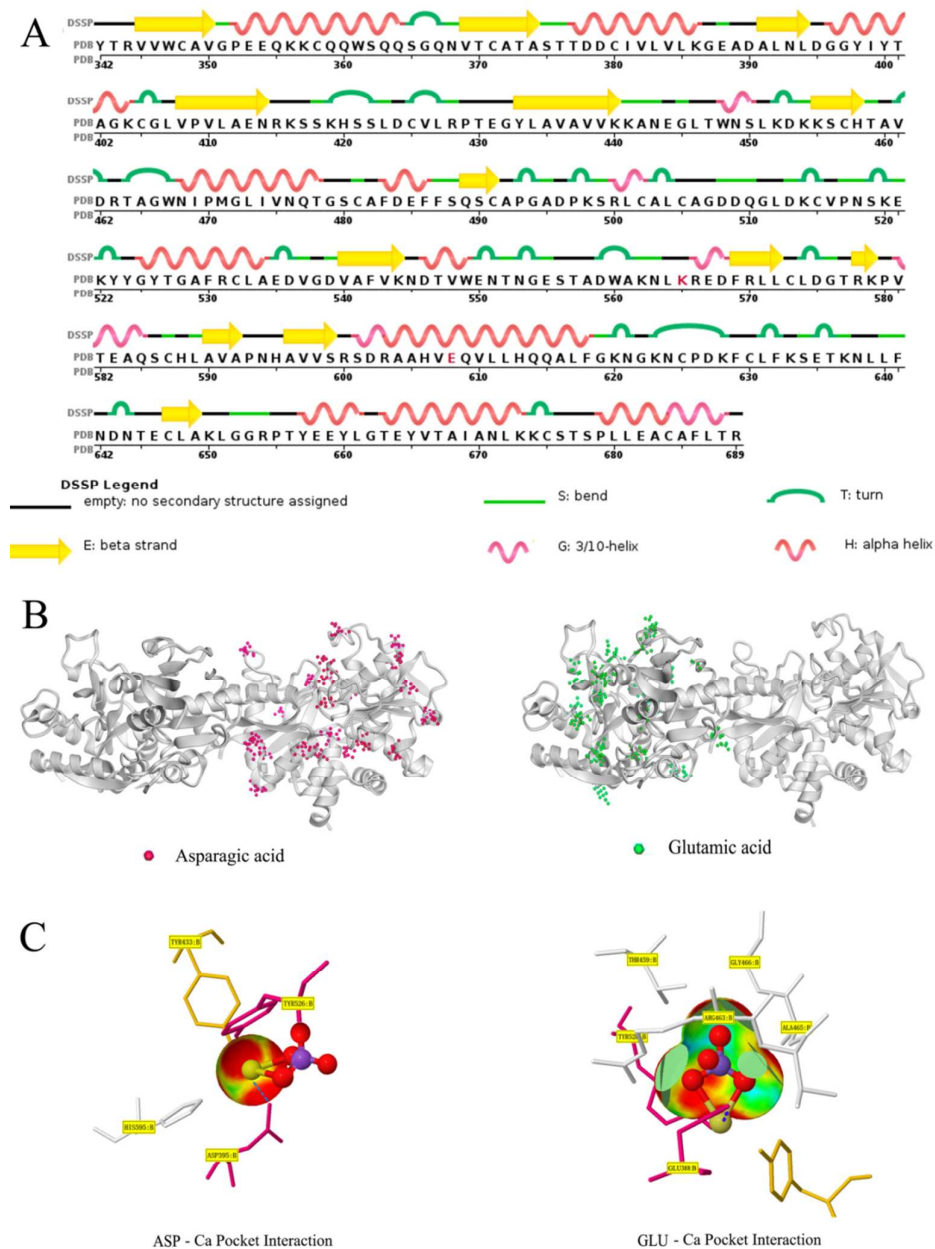


Figure S5. Molecular structure of lactoferrin. (a) molecular sequences of C-lobe domain; (b) ASP in N-lobe and GLU in C-lobe domains respectively; (c) interaction between calcium and ASP/or GLU.

Table S1. Ionic Concentration of Human Blood Plasma and SBF.

Ion conc (mM)	Na⁺	K⁺	Ca²⁺	Mg²⁺	HCO₃⁻	Cl⁻	HPO₄⁻	SO₄²⁻
Blood plasm	142	5	2.5	1.5	27	103	1	0.5
SBF	147	5	2.7	1.6	6	104	1	0.5