pharmaceutics

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Article

Hydroxyapatite Thin Films of Marine Origin as Sustainable Candidates for Dental Implants

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1. Preliminary *in vitro* testing

1.1 Apatite-forming ability

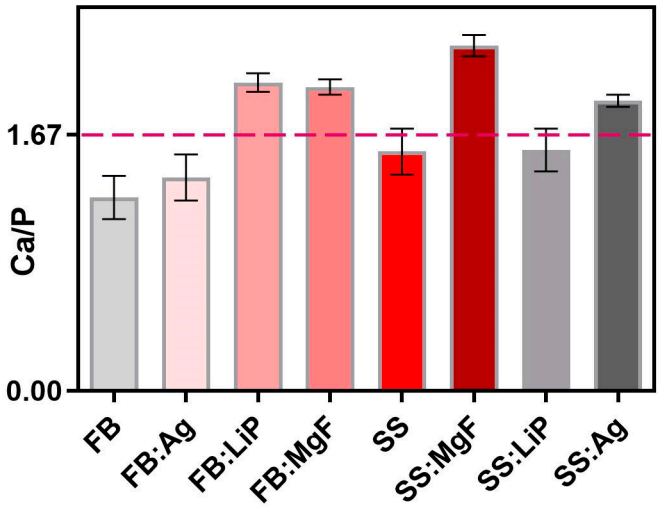

Figure S1. The values of the Ca/P ratio corresponding to the simple and doped FB si SS structures after immersion in SBF for 30 days. Note: dashed line represents the theoretical value of stoichiometric HA (~1.67).

2. Cytocompatibility Assays

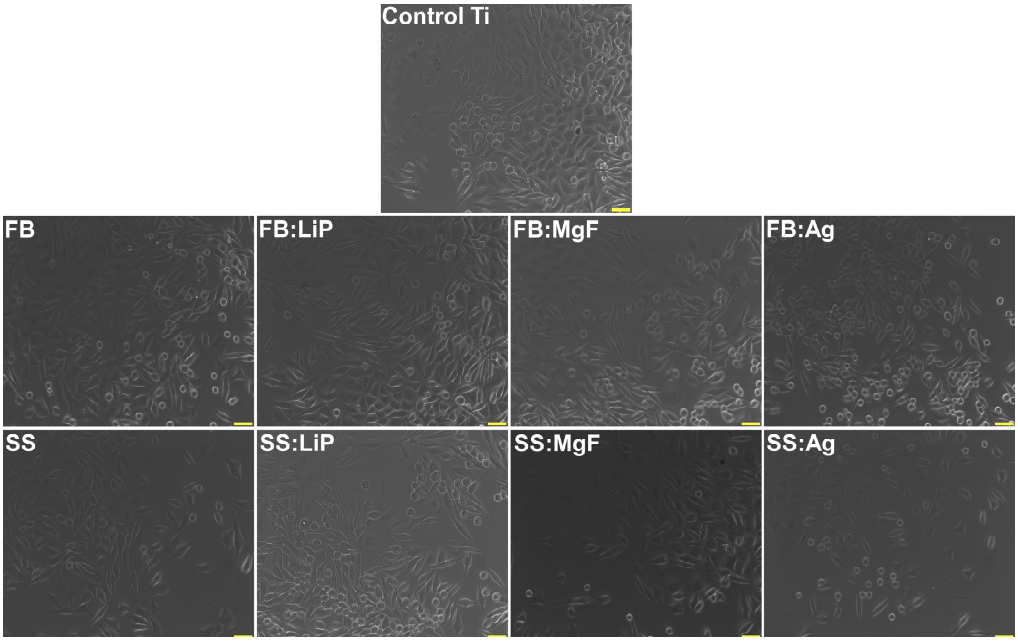

Figure S2. Contrast phase microscopy images of control Ti and simple and doped FB and SS thin films' biocompatibility, tested on osteoblast cells (G292). Magnification bar: 100 μm.

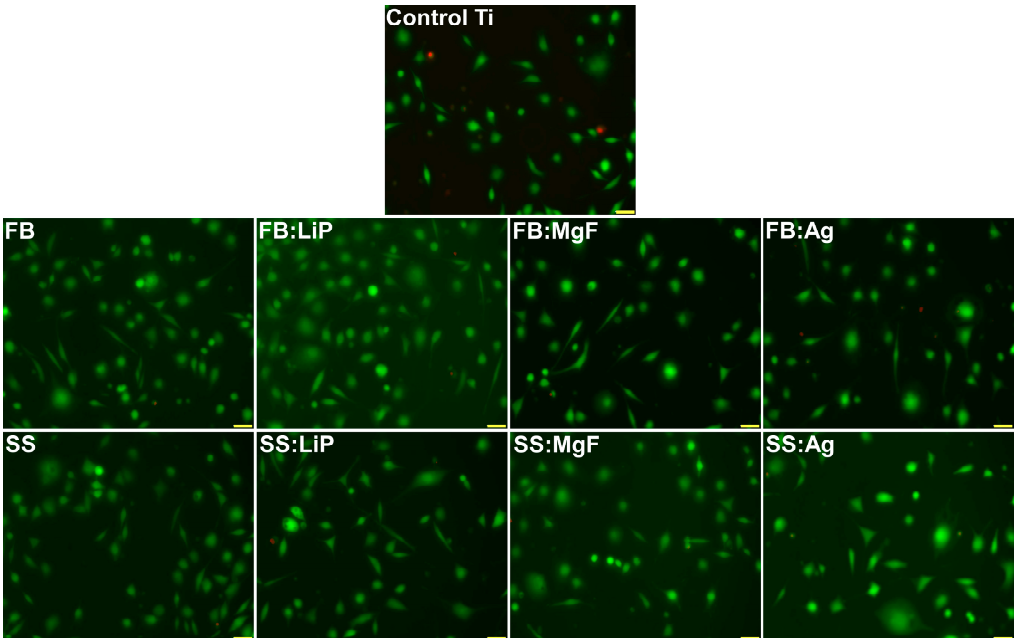

Figure S3. Fluorescence microscopy images of "Live/Dead" test, performed with NCTC L929 fibroblast cells on control Ti and simple and doped FB and SS thin films. Magnification bar: 100 μm.

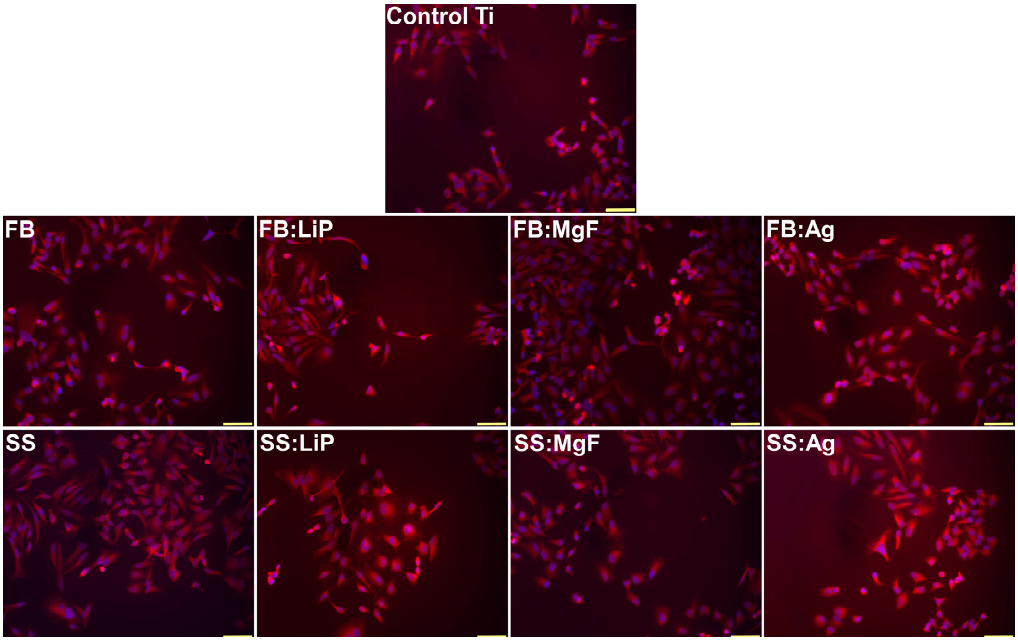

Figure S4. Fluorescence microscopy images acquired for control Ti and simple and doped FB and SS thin films using epithelial cells (HeLa). Magnification bar: 100 μm.

3. Antimicrobial Activity

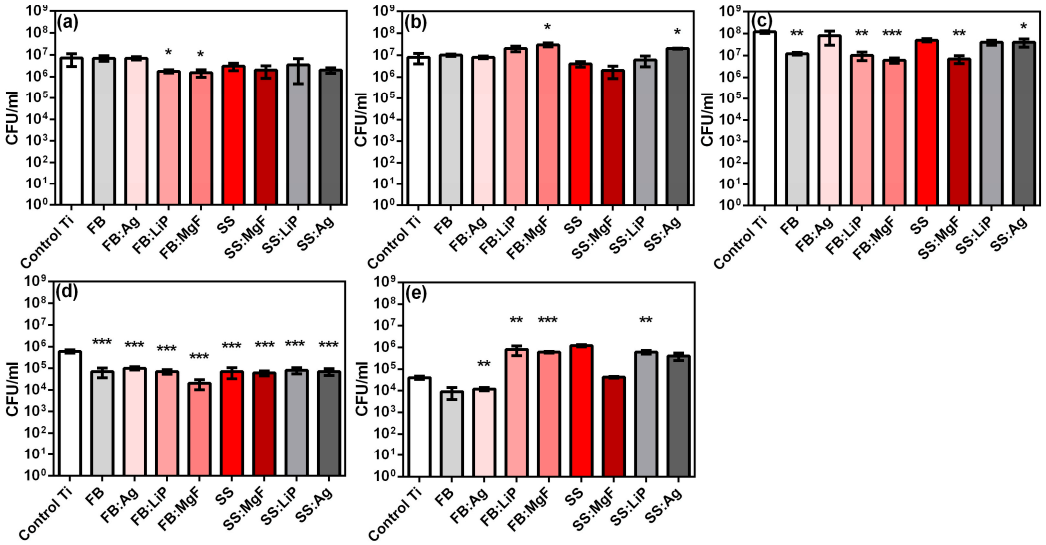

Figure S5. Number of microbial viable cells recovered from the biofilms developing on control Ti and simple and doped FB and SS thin films at T_0 (**a**), 2 h (**b**), 4 h (**c**), 24 h (**d**), and 48 h (**e**) using the *E. coli* strain (*$p < 0.05$; **$p < 0.01$; ***$p < 0.0001$).

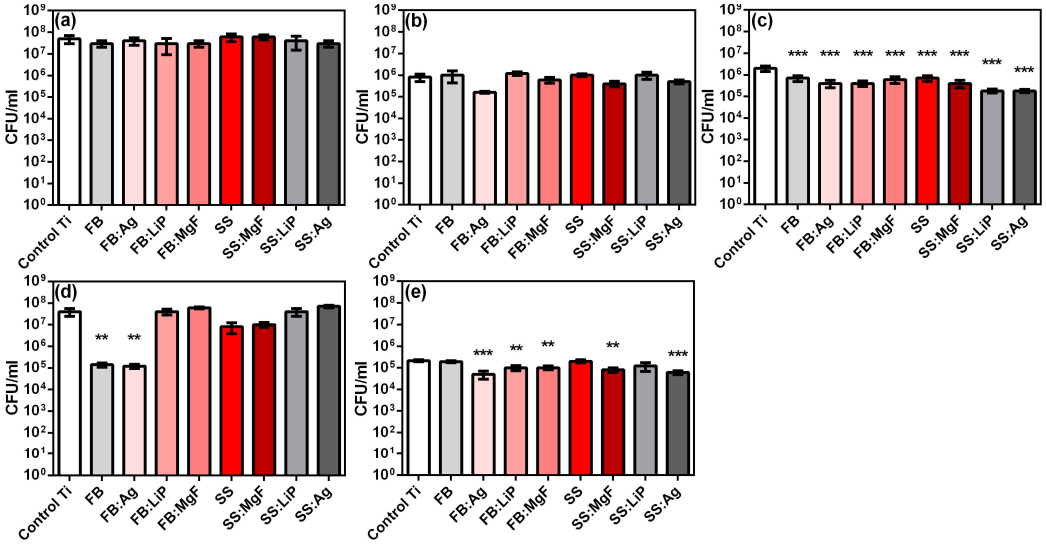

Figure S6. Number of microbial viable cells recovered from the biofilms developing on control Ti and simple and doped FB and SS thin films at T_0 (**a**), 2 h (**b**), 4 h (**c**), 24 h (**d**), and 48 h (**e**) using the *P. aeruginosa* strain (**$p < 0.01$; ***$p < 0.0001$).

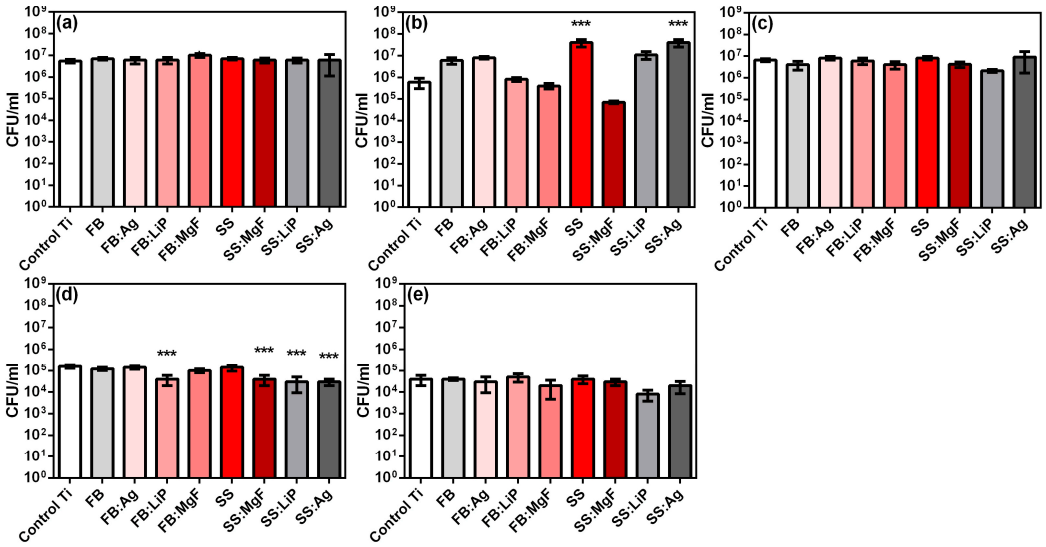

Figure S7. Number of microbial viable cells recovered from the biofilms developing on control Ti and simple and doped FB and SS thin films at T_0 (**a**), 2 h (**b**), 4 h (**c**), 24 h (**d**), and 48 h (**e**) using the *S. aureus* strain (***$p < 0.0001$).

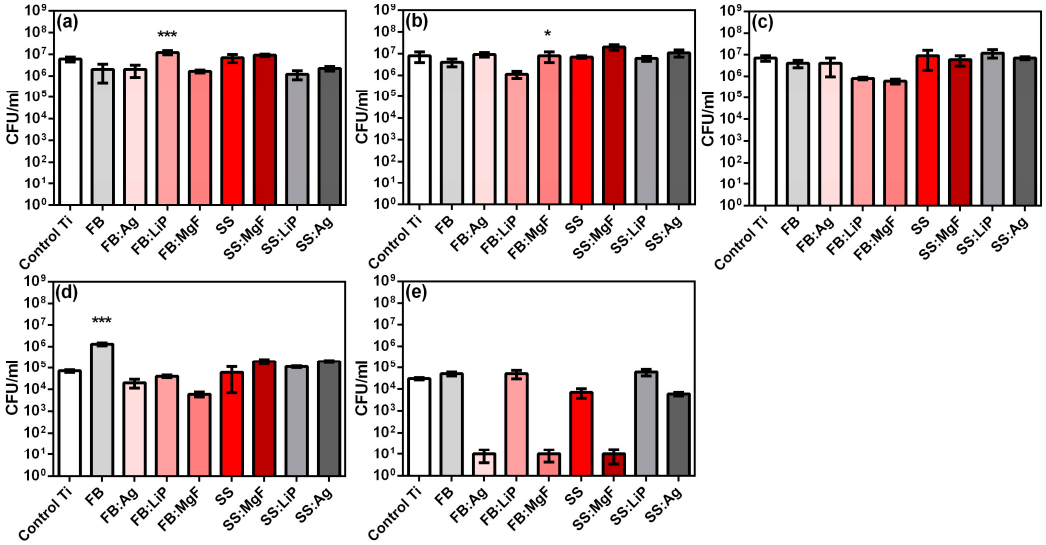

Figure S8. Number of microbial viable cells recovered from the biofilms developing on control Ti and simple and doped FB and SS thin films at T_0 (**a**), 2 h (**b**), 4 h (**c**), 24 h (**d**), and 48 h (**e**) using the *E. faecalis* strain (*$p < 0.05$; ***$p < 0.0001$).

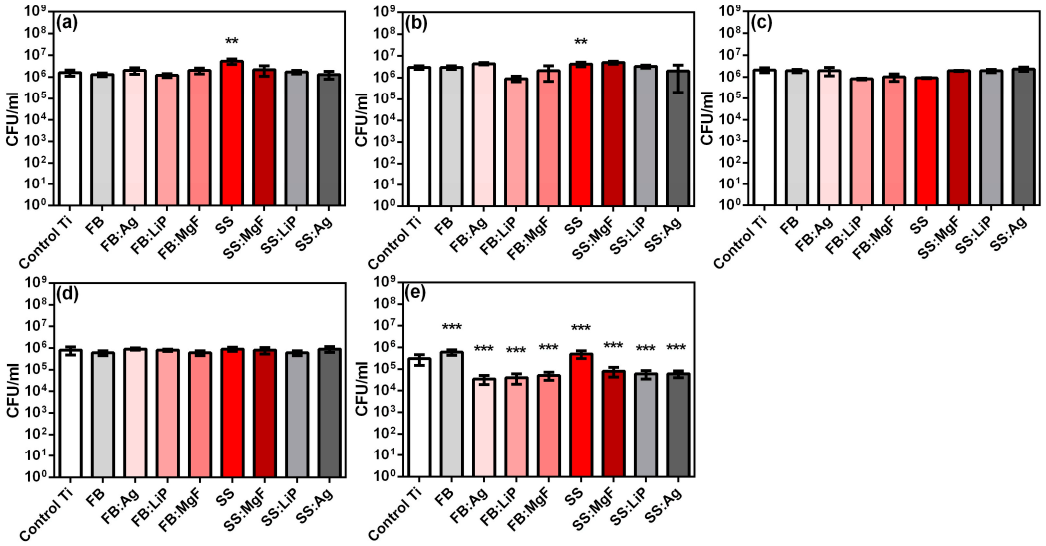

Figure S9. Number of microbial viable cells recovered from the biofilms developing on control Ti and simple and doped FB and SS thin films at T_0 (**a**), 2 h (**b**), 4 h (**c**), 24 h (**d**), and 48 h (**e**) using the *C. albicans* strain (**$p < 0.01$; ***$p < 0.0001$).