

Supplementary Information for

Synergistic effects of arginine-glycine-aspartic acid and phosphatidylserine on the surface immunomodulation and osseointegration of titanium implants

Lele Wu, Gyeong Mi Seon, Sungwon Ju, Sang Hoon Choi, En-Shi Jiang, Yongjoon Kim, Shin Hye Chung, Jin-Soo Ahn, Hyeong-Cheol Yang*

Supplementary materials

Table S1. RT-qPCR primers

Gene	Forward	Reverse
Arg-1	CTCCAAGCCAAAGTCCTTAGAG	AGGAGCTGTCATTAGGGACATC
FIZZ1	GGTCCCAGTGCATATGGATGAGACCAT AGA	CACCTCTTCACTCGAGGGACAGTTGGC AGC
GAPDH	TGTGTCCGTCGTGGATCTGA	CCTGCTTCACCACCTTCTTGAT
IL-1 β	TGGAGAGTGTGGATCCCAAG	GGTGCTGATGTACCAGTTGG
TNF- α	GGCAGGTCTACTTTGGAGTCATTGC	ACATTCGAGCCAGTGAATTCGG
iNOS	CGAAACGCTTCATTCCAA	TGAGCCTATATTGCTGTGGCT
YM-1	CAGGGTAATGAGTGGGTTGG	CACGGCACCTCCTAAATTGT

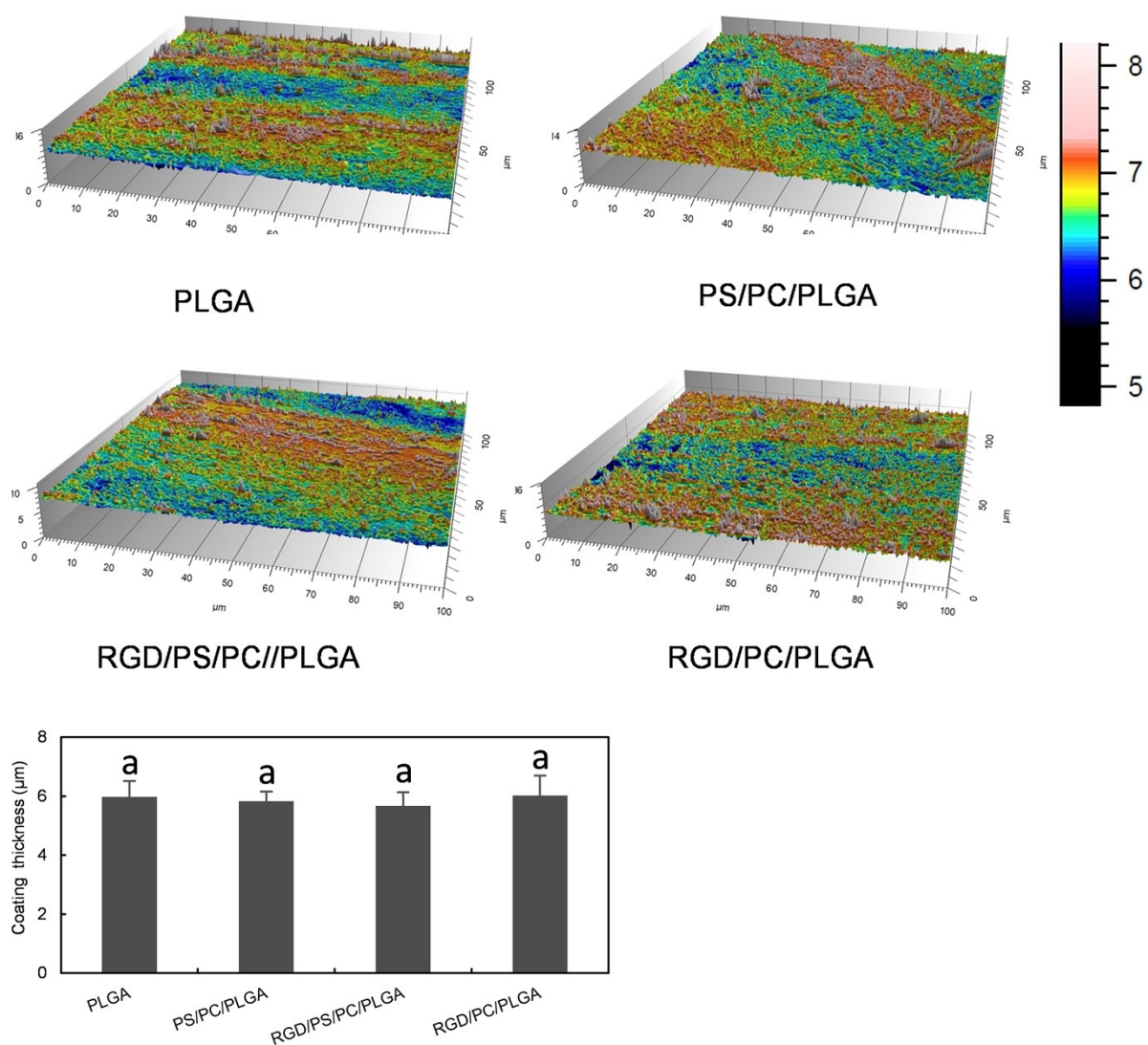


Fig. S1. The thickness of the PLGA coatings. The thickness of the PLGA coatings was measured using laser scanning confocal microscopy. Data from 3 independent experiments are presented as means \pm SD. No statistical differences were observed among the groups ($p > 0.05$).

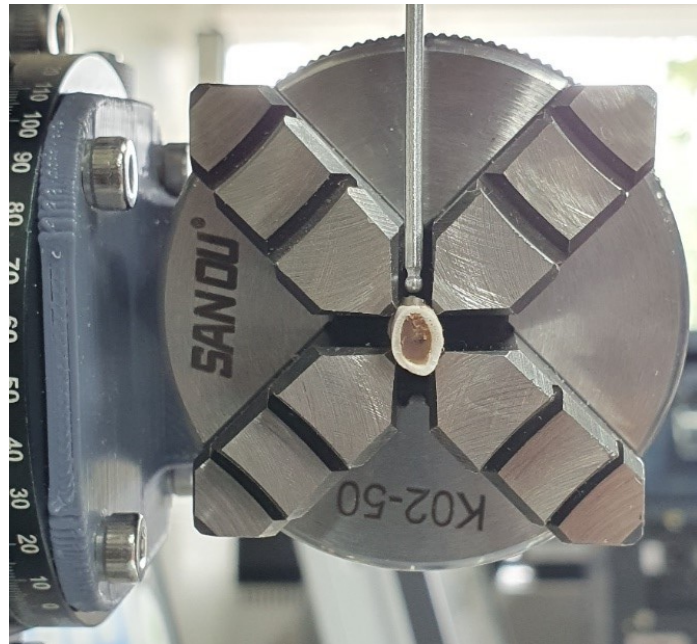


Fig. S2. Biomechanical push-out test. A holder and intender for the push-out test. The implant was pushed out of the bone at a moving speed of 1 mm/min, and the maximum pushing force was recorded.

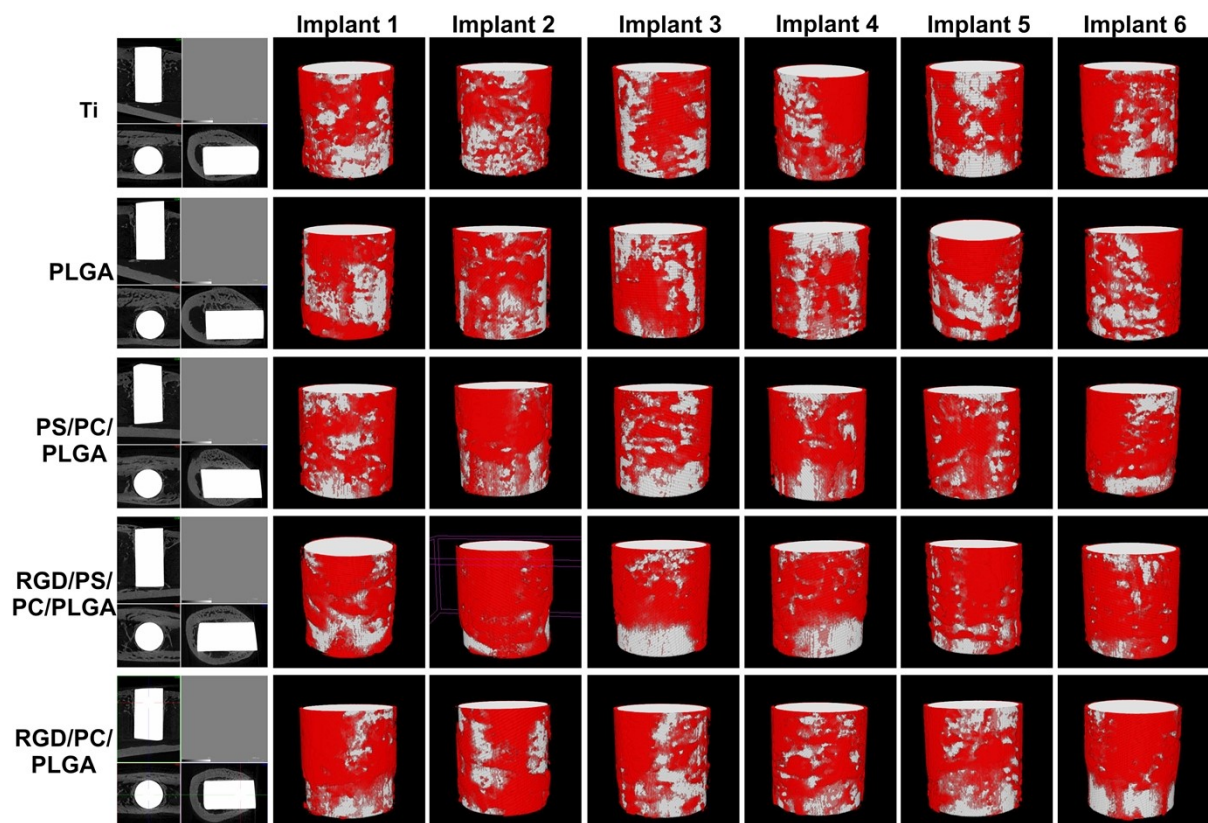


Fig. S3. Micro-CT analysis of new bone formation around the implants. Ti rods were implanted for 4 weeks, and the hard tissues around the implants were observed using micro-CT. Top and cross-sectional 2D images of the implant area, and 3D reconstructed images of the implant area (bone: red, implants: gray).