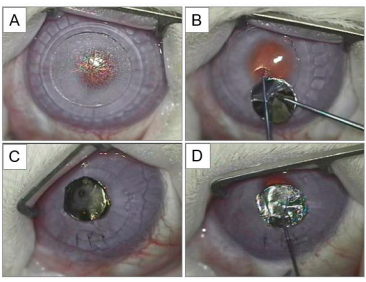
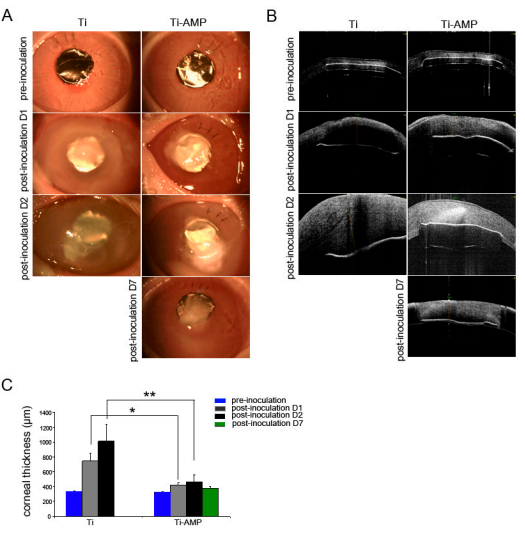
Supplementary Figure 1



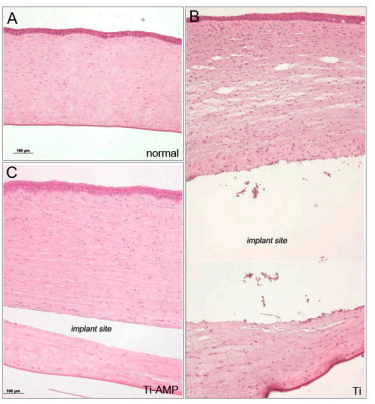
Supplementary Figure 1. The surgical procedure of rabbit cornea
(A) stroma pocket creation, (B) Ti film implantation, (C) incision closure and (D) bacteria inoculation.

Supplementary Figure 2



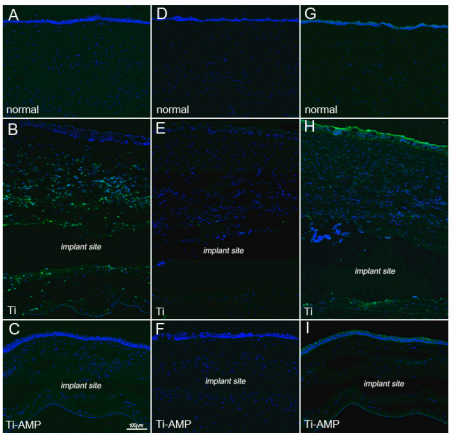
Supplementary Figure 2. In vivo bactericidal effect of SESB2V AMP against P. aeruginosa.
A: slit lamp examination of the rabbit eyes before and after implantation and bacteria inoculation
B: AS-OCT scanning of the rabbit eyes before and after implantation and bacteria inoculation
C: measurement of corneal thickness. Only cornea thickness anterior to implant was measured at pre and post-inoculation D1 and D2. "" $p < 0.05$ between pristine Ti and Ti-AMP group at post-inoculation day 1. """ $p < 0.05$ between pristine Ti and Ti-AMP group at post-inoculation day 2. One way ANOVA

Supplementary Figure 3



Supplementary Figure 3. Hematoxylin & Eosin (H&E) pictures of rabbit cornea after inoculation with P. aeruginosa.
A: normal rabbit cornea
B: rabbit cornea with pristine Ti implantation and bacterial infection.
C: rabbit cornea with Ti-AMP implantation and bacterial infection.

Supplementary Figure 4



Supplementary Figure 4. Immunostaining pictures of rabbit cornea after inoculation with P. aeruginosa. Green, inflammatory cell markers; Blue, DAPI cell nucleus counterstaining.
A-C: CD11b staining. (A) normal rabbit cornea, (B) cornea with pristine Ti implant, (C) cornea with Ti-AMP implant.
D-F: F4/80 staining. (D) normal rabbit cornea, (E) cornea with pristine Ti implant, (F) cornea with Ti-AMP implant.
G-I: MMP9 staining. (G) normal rabbit cornea, (H) cornea with pristine Ti implant, (I) cornea with Ti-AMP implant.