Supplementary data

Table S1

Inhibition zone diameter of AgNP gel (S1–S3) and povidone iodine (PI) against two species of human pathogens and animal pathogen (five isolates of *S. pseudintermedius*).

Bacteria	Inhibition zone diameter (mm)[a]			
	S1	**S2**	**S3**	**PI**
E. coli O157/H7	14.00 ± 2.83	11.50 ± 0.71	9.00 ± 0.00	12.00 ± 0.00
S. aureus ATCC 25923	14.00 ± 0.00	13.00 ± 0.00	12.00 ± 0.00	22.50 ± 4.95
P. aeruginosa ATCC 27853	13.50 ± 0.71	12.00 ± 0.00	11.00 ± 0.00	22.50 ± 0.71
* MIC407	10.75 ± 1.06	10.00 ± 0.00	8.25 ± 1.06	12.88 ± 1.24
* MIC408	11.50 ± 0.71	9.25 ± 1.06	9.88 ± 0.18	13.00 ± 0.00
* MIC411	9.50 ± 0.71	8.75 ± 0.71	7.63 ± 0.53	12.50 ± 0.71
MIC504	8.12 ± 0.88	9.00 ± 0.00	8.50 ± 0.71	13.50 ± 0.71
MIC509	9.25 ± 1.06	10.62 ± 1.24	8.00 ± 0.00	14.00 ± 0.00
Average	11.46 ± 0.99	10.85 ± 0.46	9.53±0.31	15.36 ± 1.04**

[a]Mean value ± SD, the mean of the trilicate samples. Asterisk (**) denotes a statistically significant difference compared with other groups ($p < 0.05$). The inhibition zone includes the diameter of the well (6 mm). The five isolates of *S. pseudintermedius* are MIC 407, 408, 411, 504 and 509.

* Methicillin-resistant *Staphylococcus pseudintermedius* (MRSP)

Table S2

Comparison of the inhibition zone diameter of AgNP gel (S1–S3) with povidone iodine (PI) after the antimicrobial agents were incubated with bacteria for 48 h.

Agents	Inhibition zone (mm)[a]			
	***S. aureus* ATCC 25923**		***P. aeruginosa* ATCC 27853**	
	24 h	**48 h**	**24 h**	**48 h**
S1	14.00 ± 0.00	14.00 ± 0.00	15.25 ± 0.35	15.25 ± 0.35
S2	14.25 ± 1.77	14.25 ± 1.77	14.63 ± 1.11	14.63 ± 1.11
S3	11.50 ± 0.71	11.50 ± 0.71	12.83 ± 1.03	12.83 ± 1.03
PI	22.50 ± 4.95	17.00 ± 2.65	22.50 ± 0.71	15.00 ± 0.00

[a]Mean value ± SD, the mean of the triplicate samples. The inhibition zone includes the diameter of the well (6 mm).

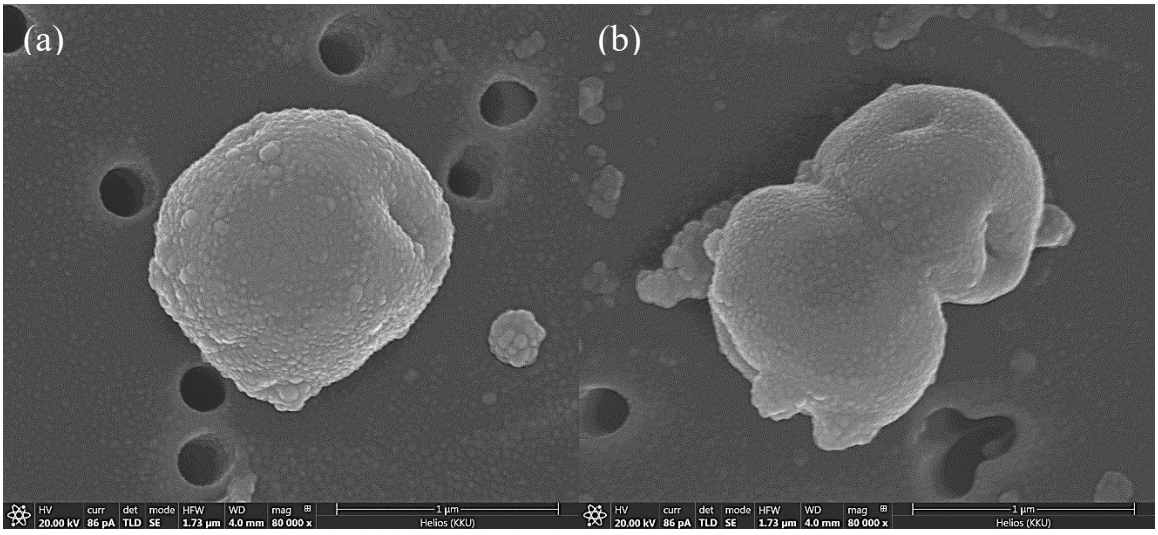

Figure S1 Cell morphological change of *S. pseudintermedius* MIC 411 observed by FIB-FESEM. The bacterial cells were treated at concentration of MBC level for 1.5 h with AgNSs (a), and anisotropic AgNPs (b). Bacterial cell treated AgNPs show the distorted cell and membrane damage with disintegration and pores.