Supporting Information

Synthesis of DNA-guided silver nanoparticle on the graphene oxide surface: enhanced the antibacterial effect and the wound healing activity

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This corrected version, in which Fig. S7 has been corrected, replaces that published online 7th August 2018.

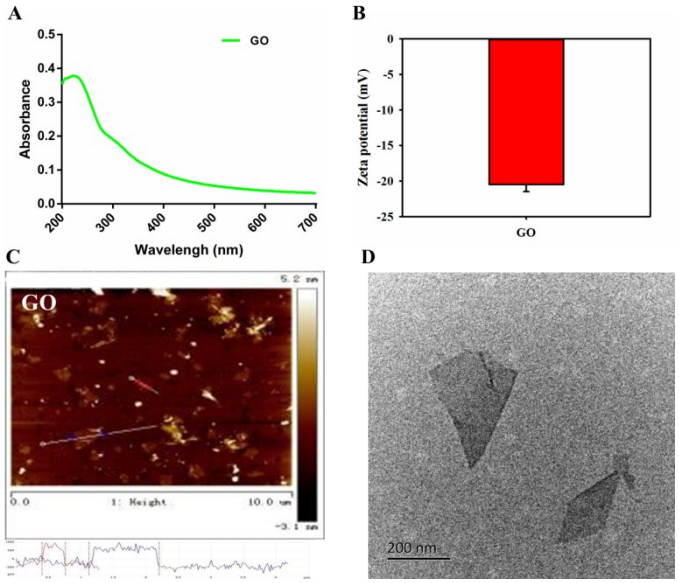

Fig.S1. (A) The UV-vis absorption spectra of GO. (B) The zeta potential of GO. (C) The Atomic force microscope of GO. (D) The transmission electron microscope of GO.

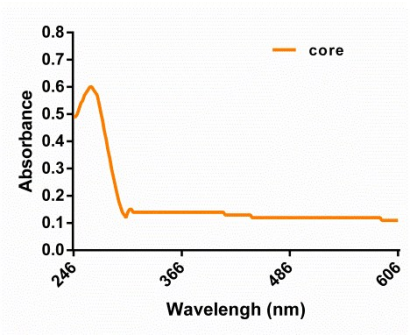

Fig.S2. The UV-vis absorption spectra of ssDNA (core).

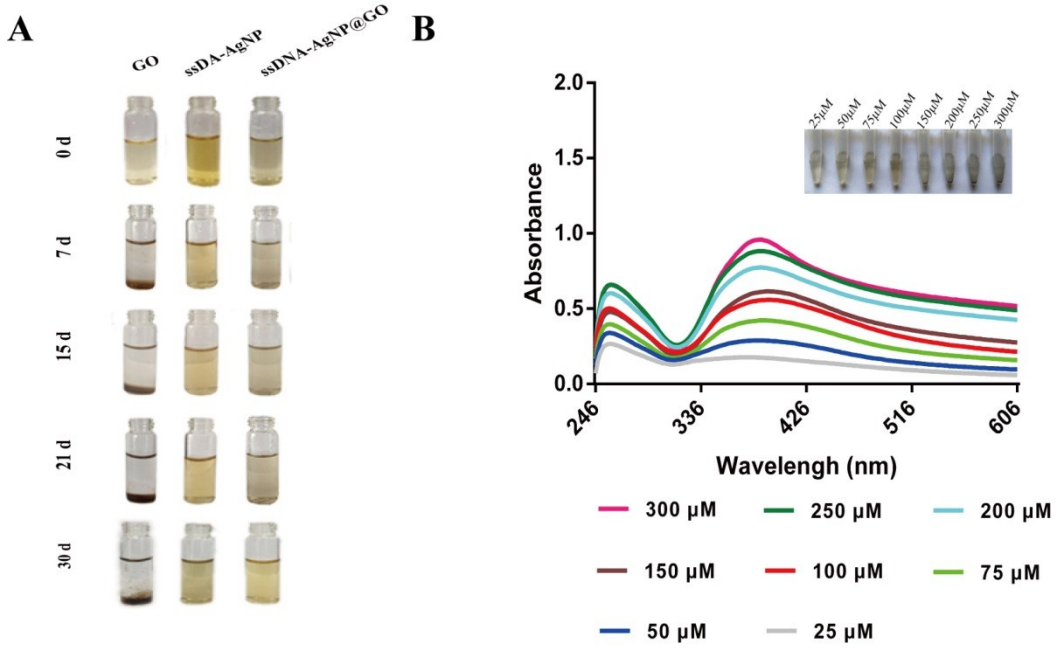

Fig.S3. (A) The dispersion stability of GO, ssDNA-AgNPs and ssDNA-AgNPs@GO.(B) The UV-vis absorption spectra of different concentrations ssDNA-AgNPs@GO.

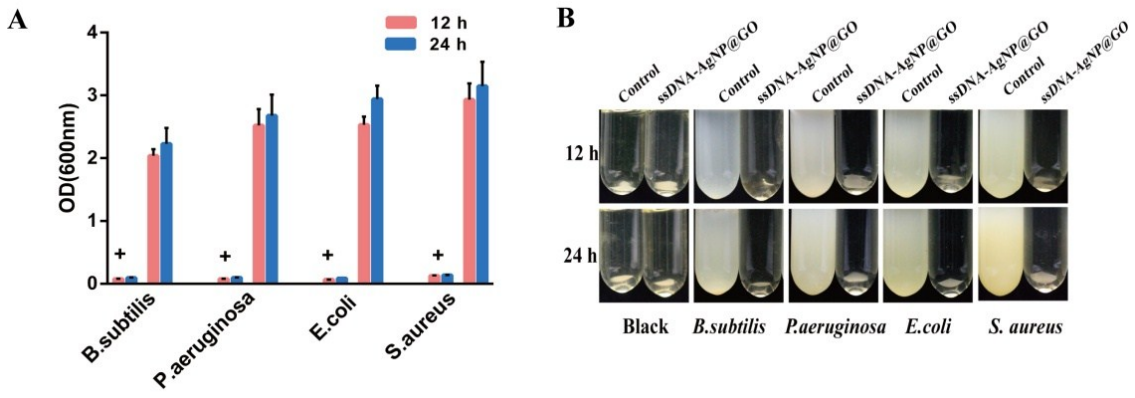

Fig.S4. Antibacterial activity of ssDNA-AgNPs@GO nanoparticles (A) Optical density at 600 nm of different bacterial suspensions treated and untreated with ssDNA-AgNPs@GO (+): *E. coli*, 6.8 μg/mL; *P.aeruginosa*, 6.8 μg/mL; *S.aureus*, 11.9 μg/mL; *B.subtilis*, 10.2 μg/mL. (B) LB liquid medium turbidity assays.

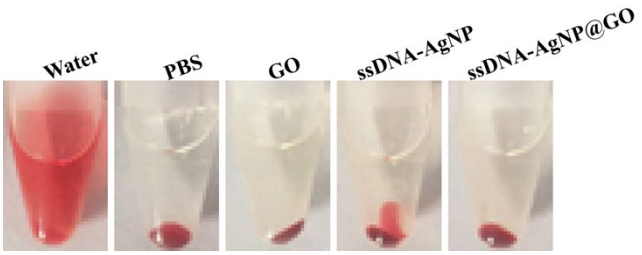

Fig.S5. Photographs of hemocytolysis with different treatment.

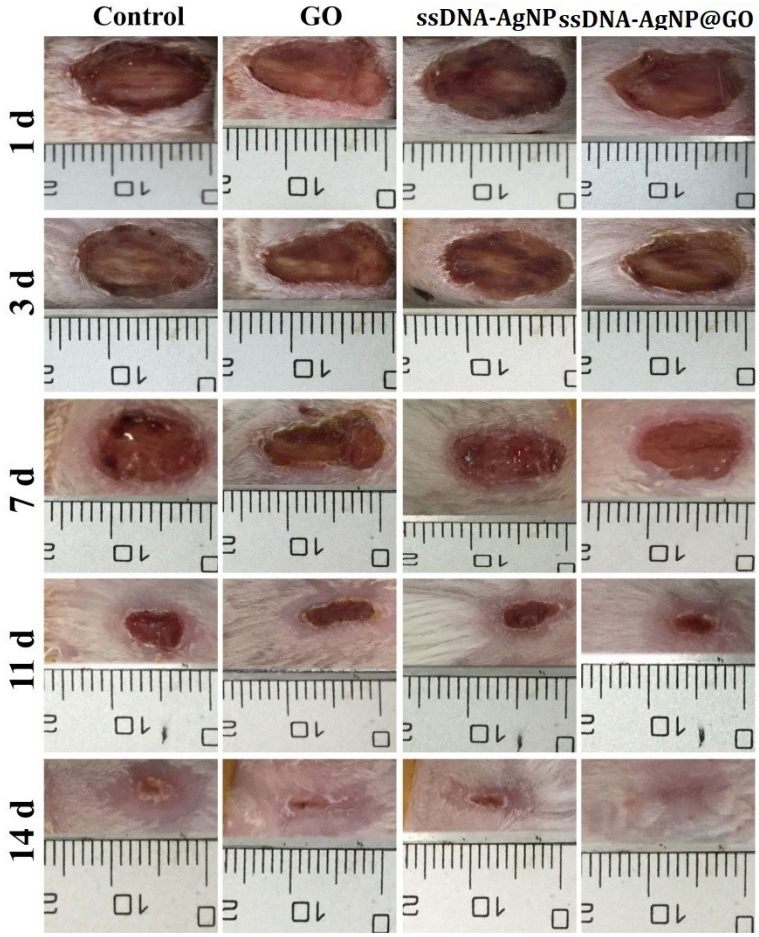

Fig.S6. Images of wound infection and healing following with different treatment for the indicated days.

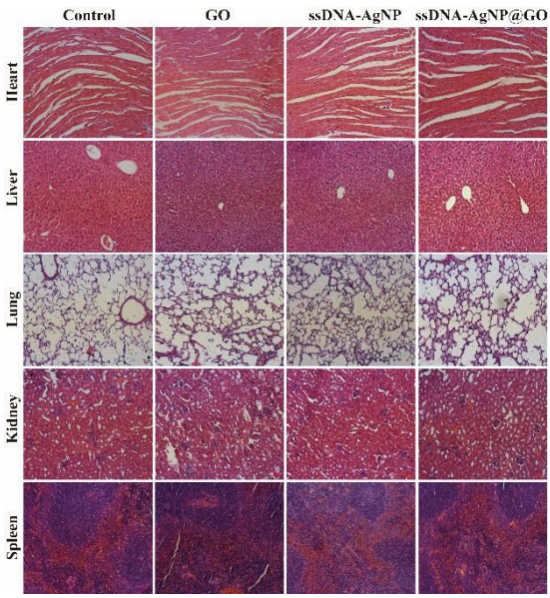

Fig.S7. Pathological study of the cytotoxic effect of ssDNA-AgNPs@GO. H&E staining of the heart, liver, lung, kidney and spleen tissue slices of different groups with treatment for 14 days .

Table S1. Values of Minimum inhibitory concentration (MIC) for the two nanomaterials (μg mL^{-1}) against bacteria

Bacteria	ssDNA-AgNPs@GO	ssDNA-AgNPs
E. coli	6.8	10.2
P. aeruginosa	6.8	10.2
B. subtilis	10.2	11.9
S. aureus	11.9	13.6