

Tannic acid-inspired, self-healing, and dual stimuli responsive dynamic hydrogel with potent antibacterial and anti-oxidative properties

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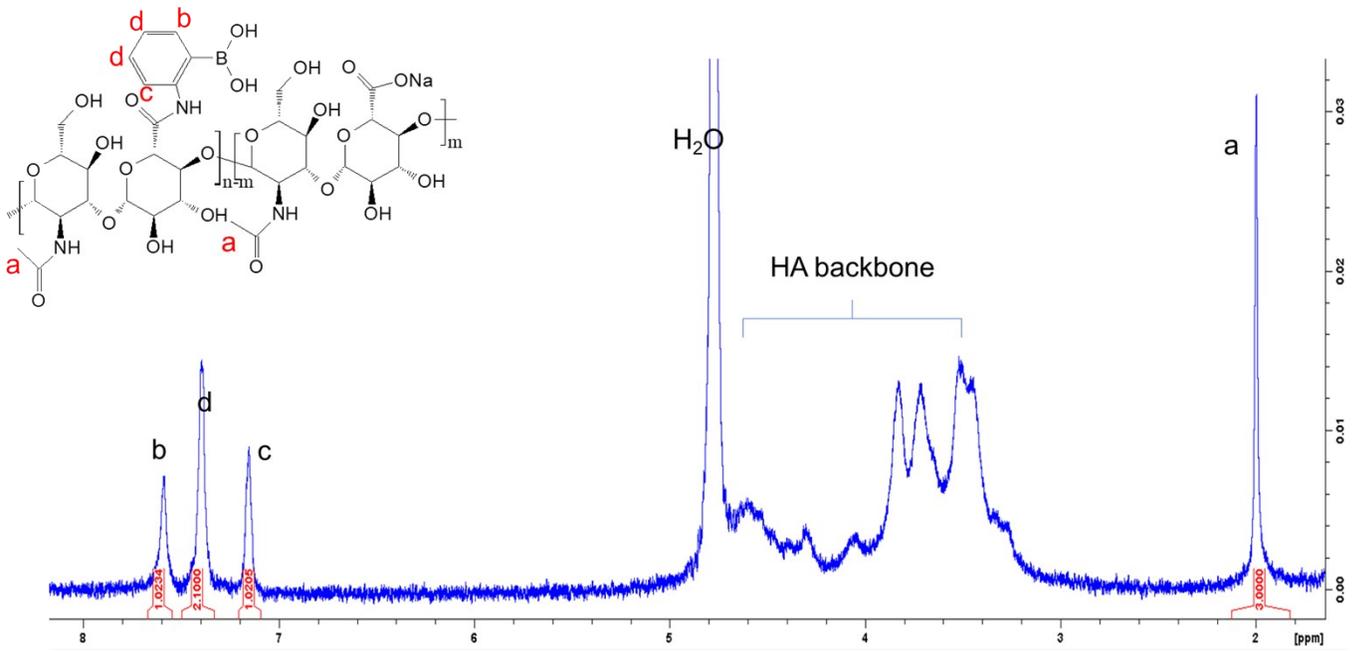


Figure S1. NMR spectra of HA-PBA.

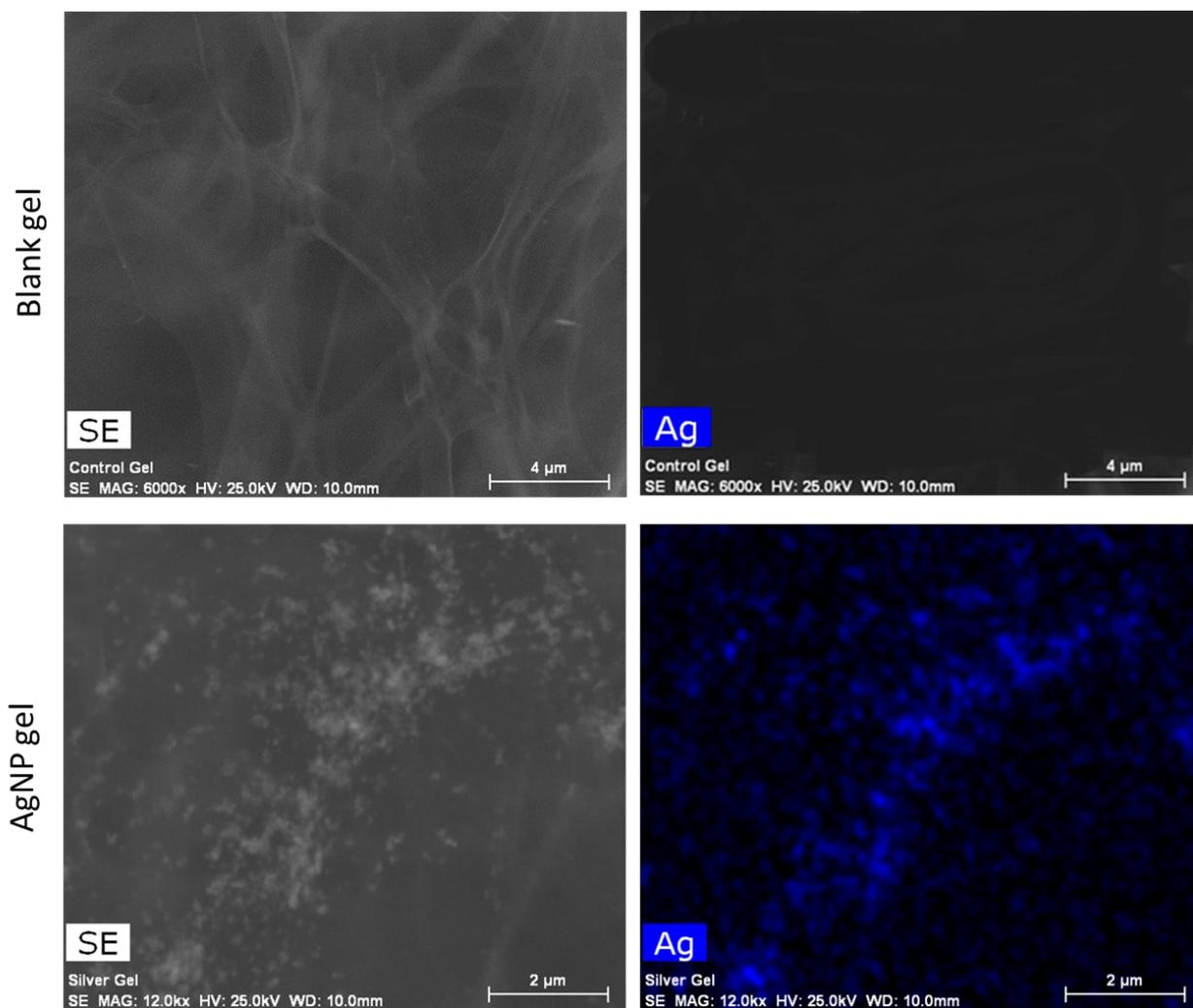


Figure S2. SEM-EDX images for the blank gel and AgNP gel. EDX mapping confirmed the nanoparticles found in AgNP gel were silver nanoparticles.

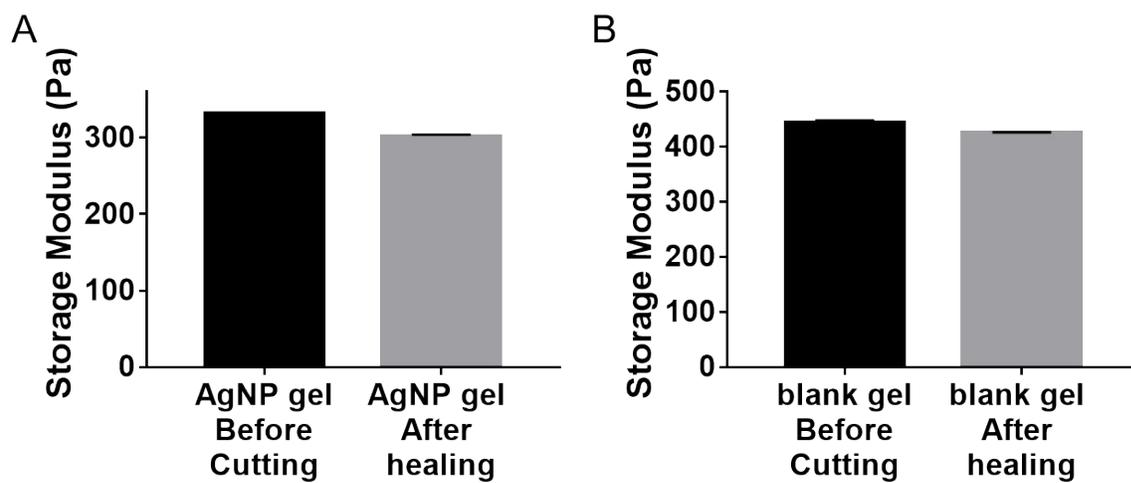


Figure S3. A&B) Storage modulus (G') of AgNP hydrogel and blank hydrogel before cutting and after healing.

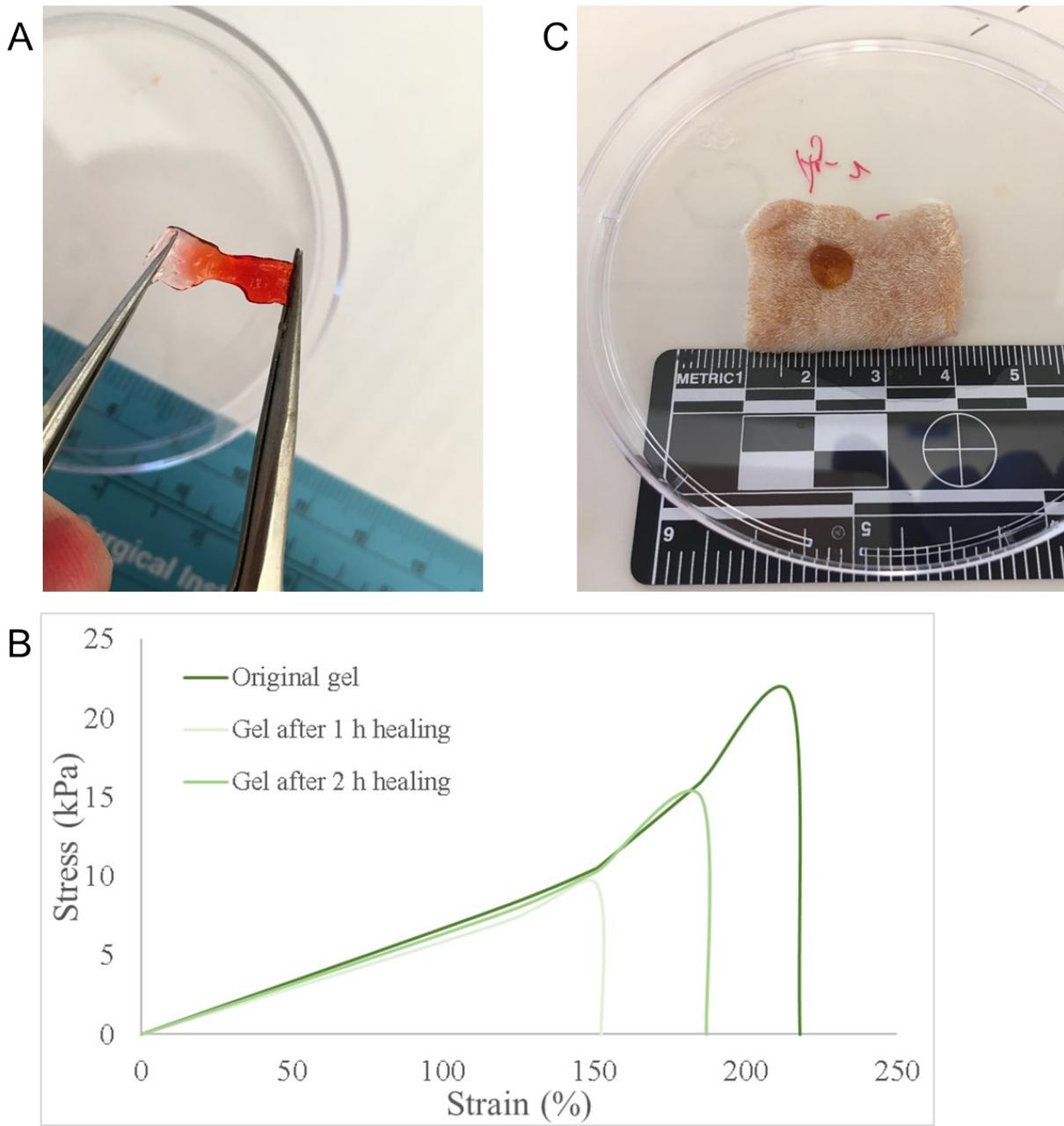


Figure S4. Self-healing and injectability of dynamic hydrogel. A) Two pieces of HA-PBA-TA hydrogel were healed together and could be pulled on the edges by the tweezers performing like a single piece of hydrogel; B) evaluation of tensile stress-strain curve for the dynamic hydrogel before cutting and after healing; C) illustration of AgNP loaded hydrogel easily injected through needles and filled into skin wound area as a dressing.

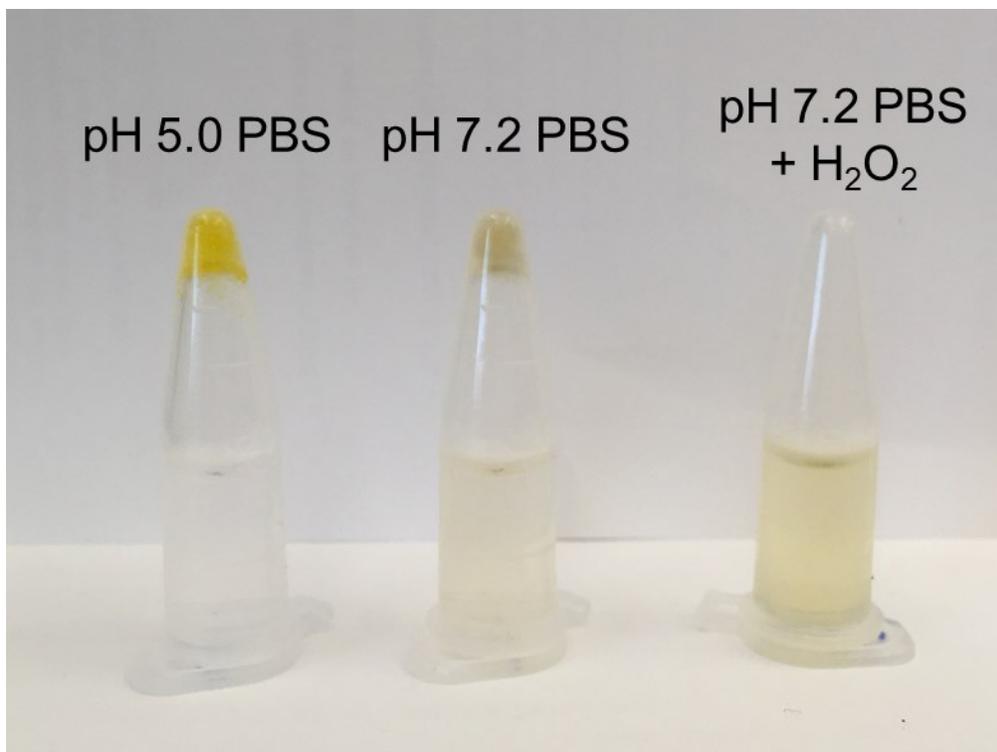


Figure S5. FITC-BSA loaded HA-PBA-TA hydrogel after 20 h incubation in different solution.

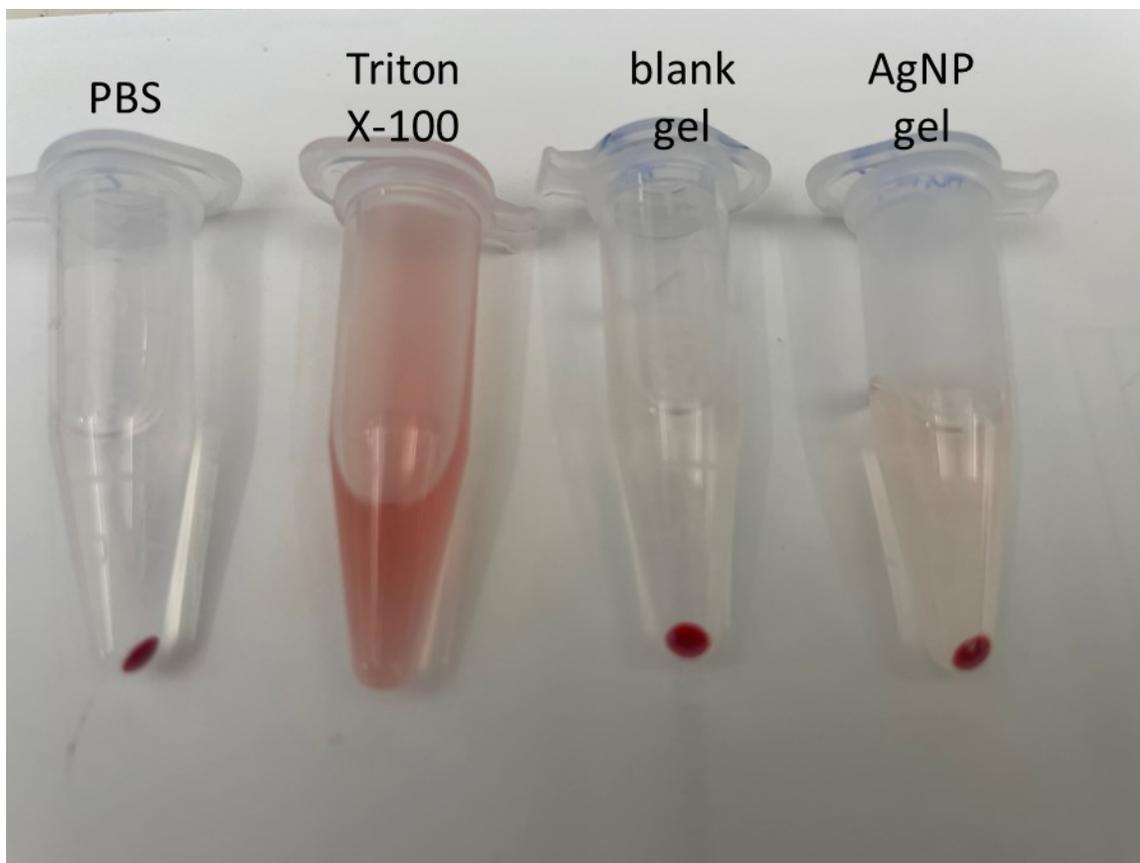


Figure S6. Representative images of samples after the in vitro hemolysis assay.

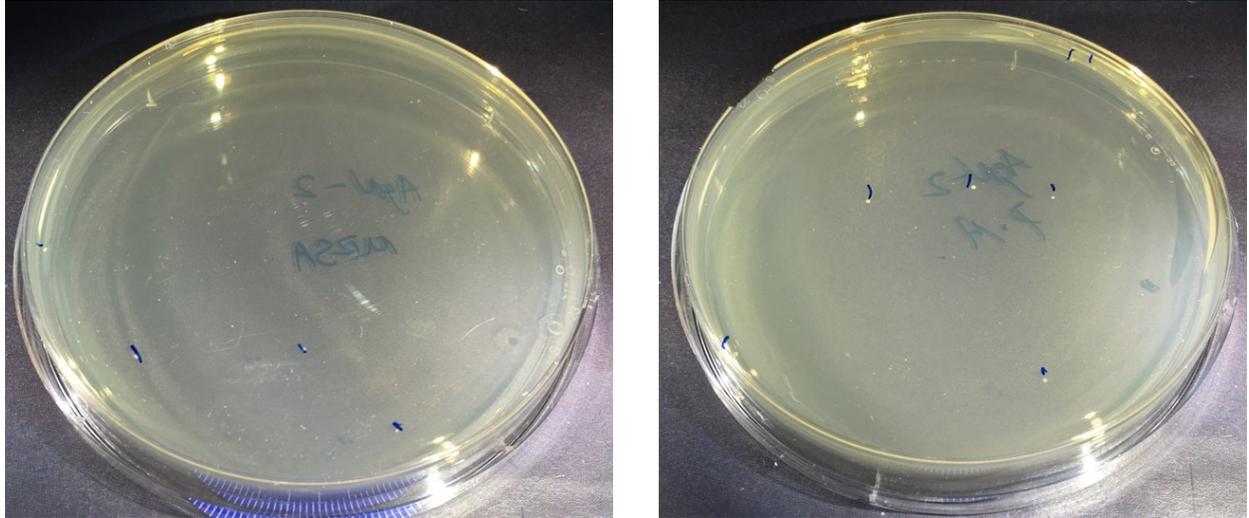


Figure S7. Only few MRSA (left) and PA (right) colonies were proliferated from the bacteria suspension collected after the AgNP gel incubation.