

Engineering platelet-rich plasma based multifunctional injectable hydrogel with photothermal, antibacterial, and antioxidant properties for skin regeneration

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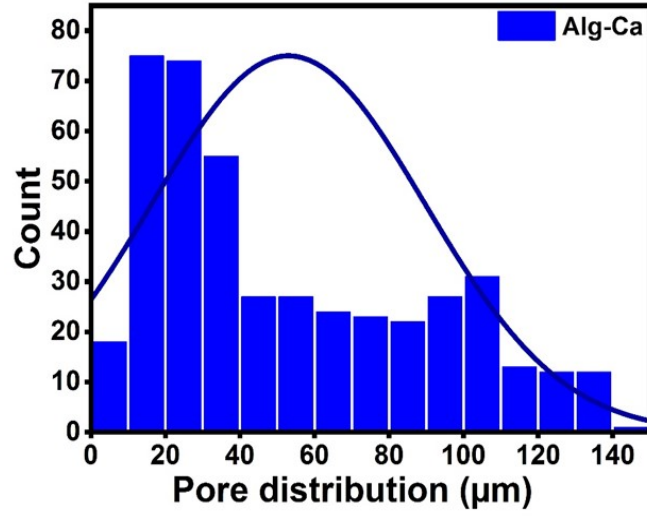


Fig.S1 Pore distribution of Alg-Ca hydrogel.

Results

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -22.1	Peak 1: -22.1	100.0	8.74
Zeta Deviation (mV): 8.74	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0103	Peak 3: 0.00	0.0	0.00
Result quality : Good			

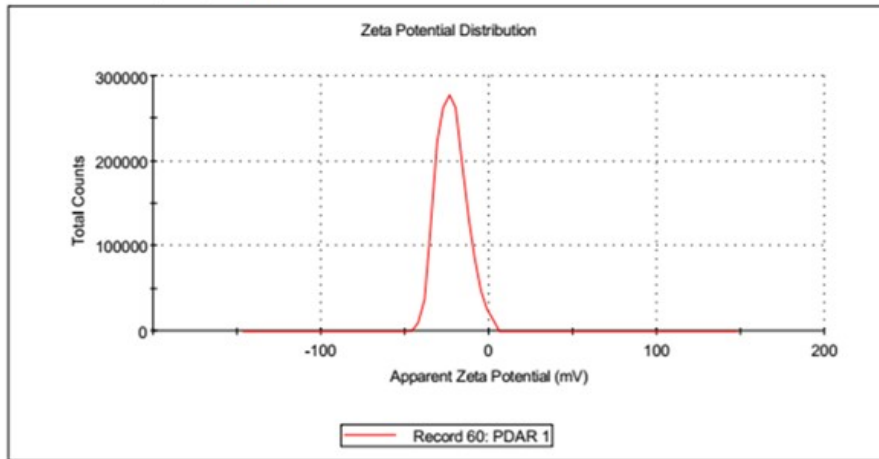


Fig.S2 Zeta Potential of polydopamine NPs.

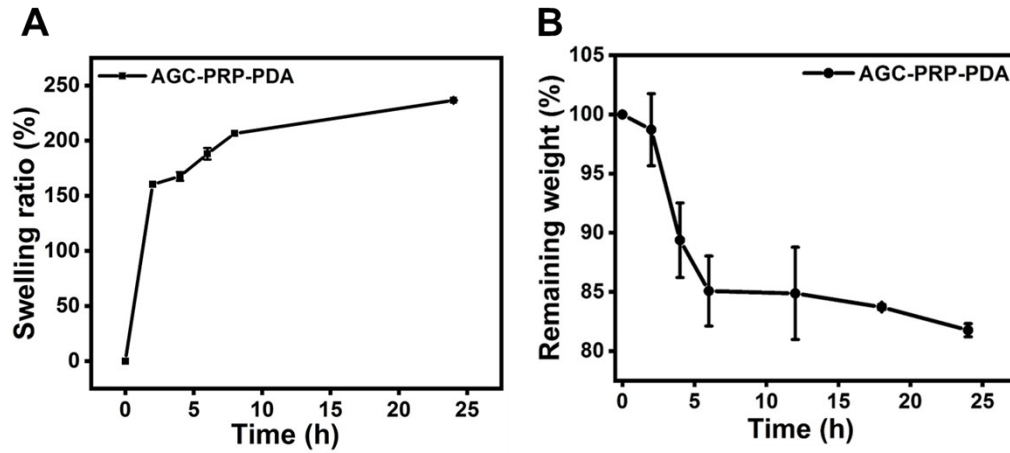


Fig. S3 (A) Swelling and (B) *in vitro* degradation profile of AGC-PRP-PDA hydrogel.

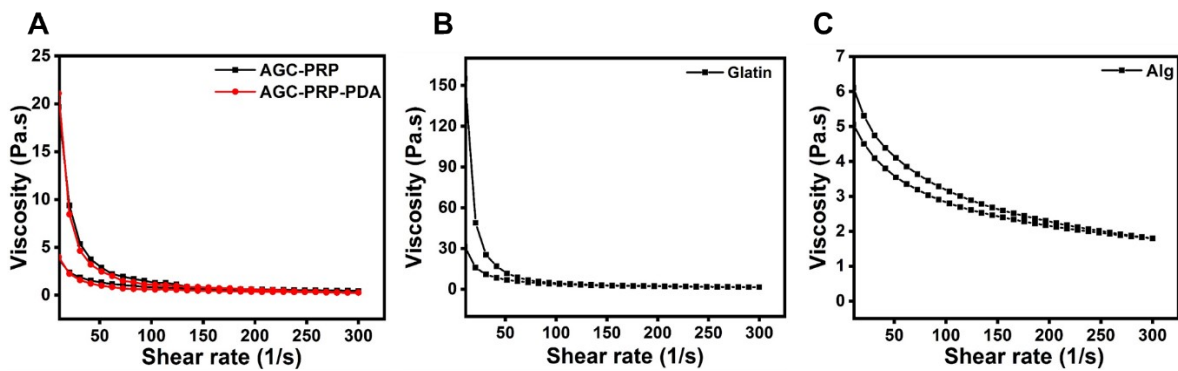


Fig. S4 Rheological behavior of (A) AGC-PRP with/without PDA. (B) Gelatin 15% (w/v). (C) Alginate 2.5% (w/v).

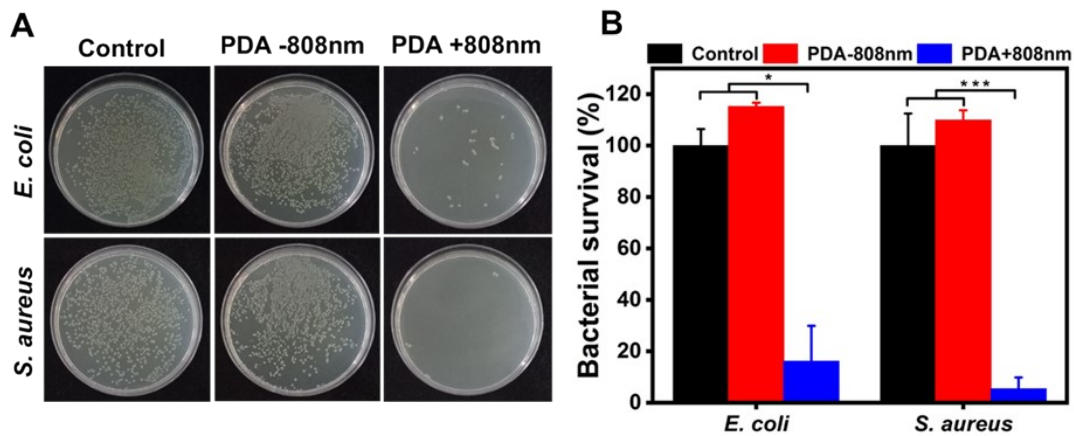


Fig. S5 Antibacterial activity of polydopamine NPs against *E. coli* and *S. aureus* in LB medium mean \pm SD, n=3, $\rho < 0.05$, $\rho < 0.001$).

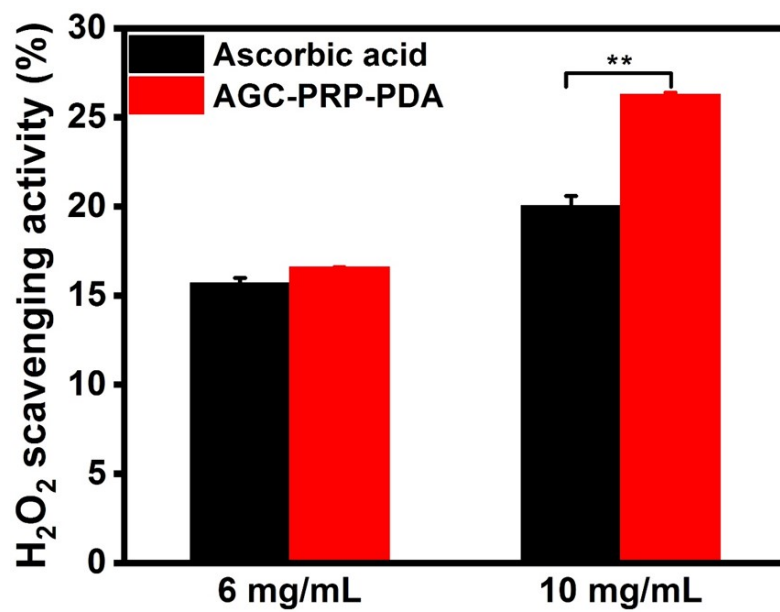


Fig. S6 H₂O₂ scavenging of AGC-PRP-PDA hydrogel and ascorbic acid. ** $\rho < 0.01$



Fig. S7 The amount of platelets at similar volume. of PPP and PRP fractions

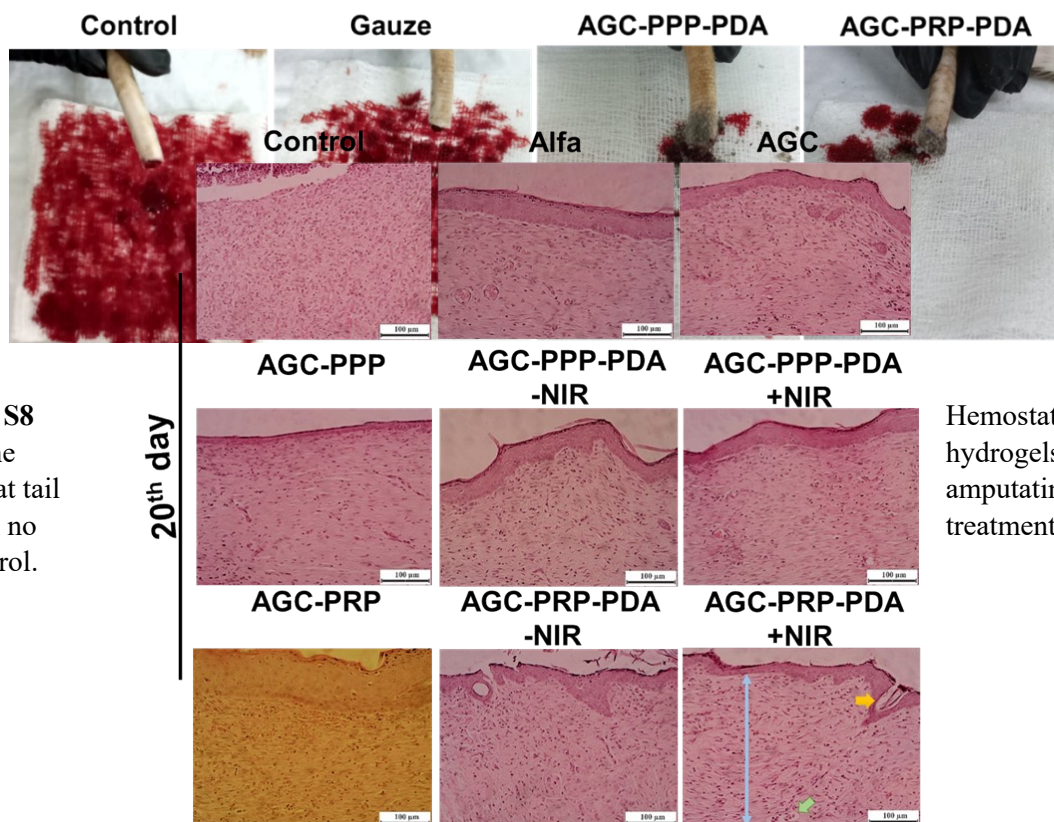
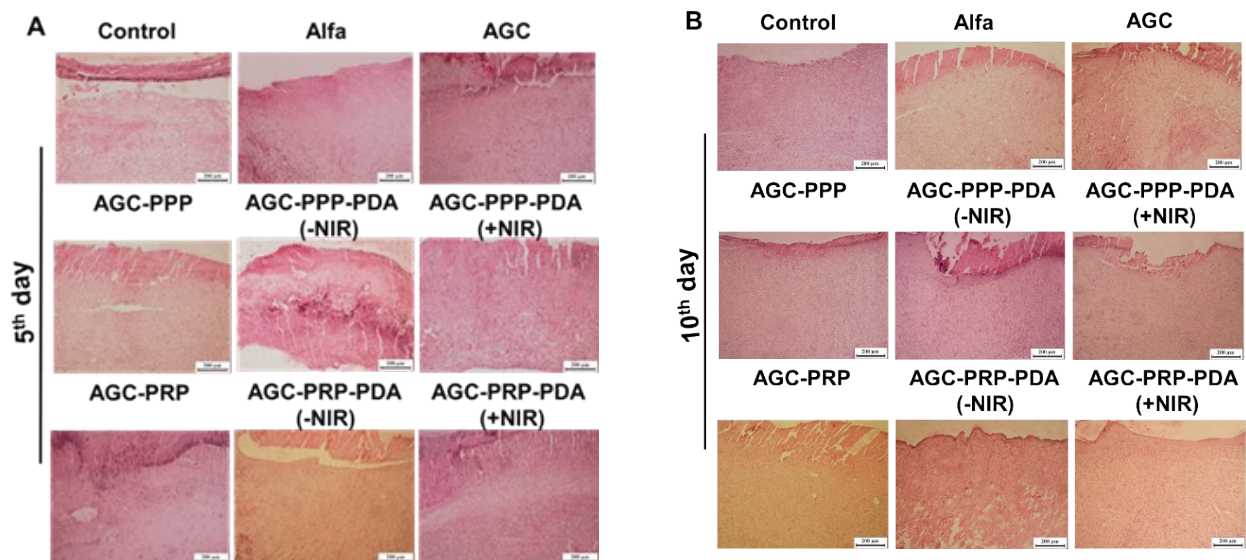


Fig. S8 of the on rat tail with no control.

Hemostatic images hydrogels or gauze amputating wounds treatment as a

Fig. S9 H&E analysis of the of wound areas after 20 day of the different treatments. Yellow, green, and two-sided arrows show a hair follicle, blood vessel, and thickness of dermis layer.



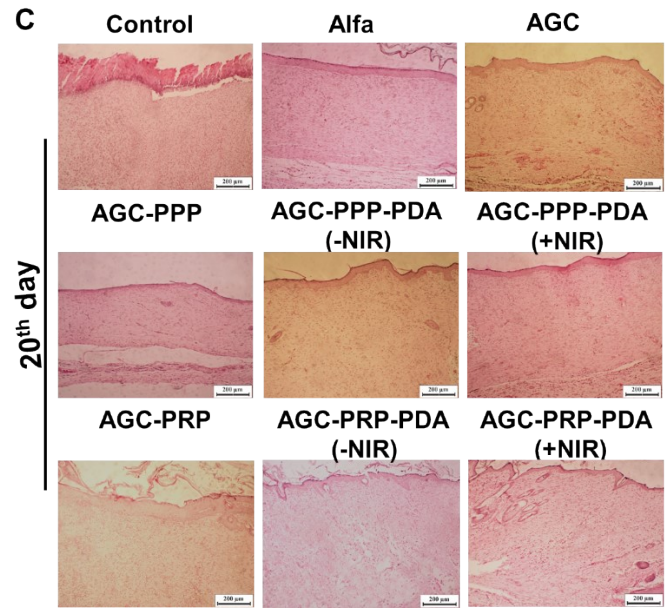


Fig. S10 Histological analysis of wound area with H&E staining after A) 5th, B) 10th , and C) 20 day of therapy for all groups, scale bar: 100 μ m.