

Supporting Information

A honokiol-mediated robust coating for blood-contacting devices with anti-inflammatory, antibacterial and antithrombotic properties

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2. Supporting Methods

2.1 Drug release

Briefly, each sample was immersed into PBS solution, and the ratio of the sample area to released solution was $3 \text{ cm}^2 \cdot \text{mL}^{-1}$. Then the released solutions at different times were measured by UV–Vis spectrometer (UV-3200, Shanghai, China).

3. Supporting Figures

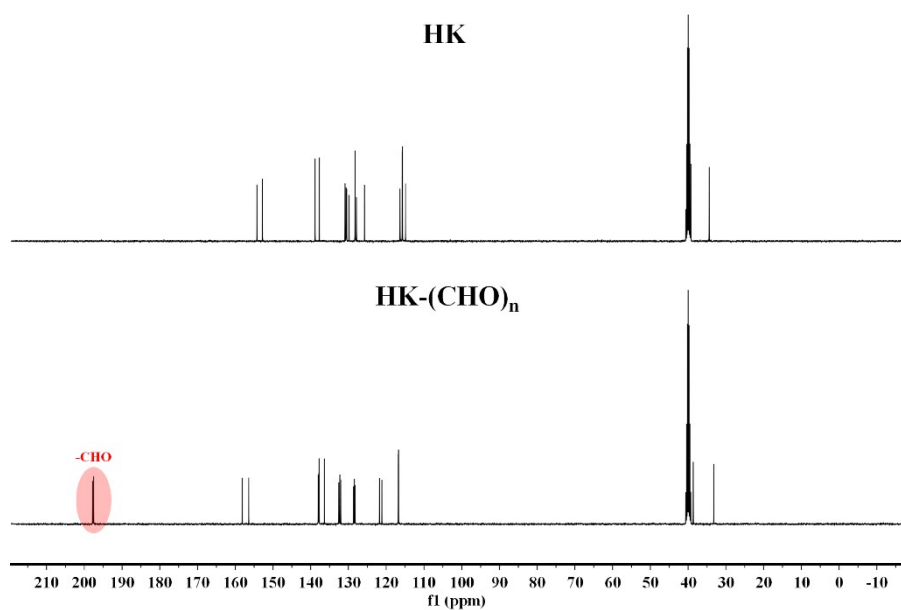


Fig. S1: The NMR result of HK and aldehyde modified HK.

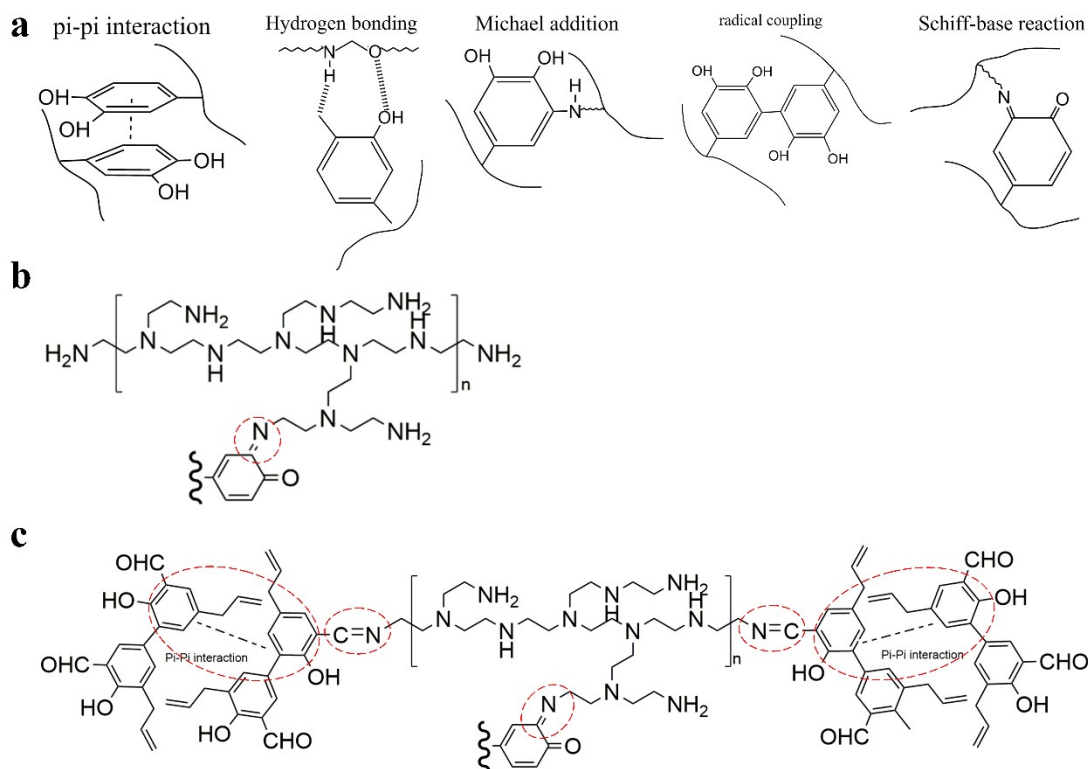


Fig. S2. The illustration of chemical reactions were involved in the synthesis of DPHc coating.

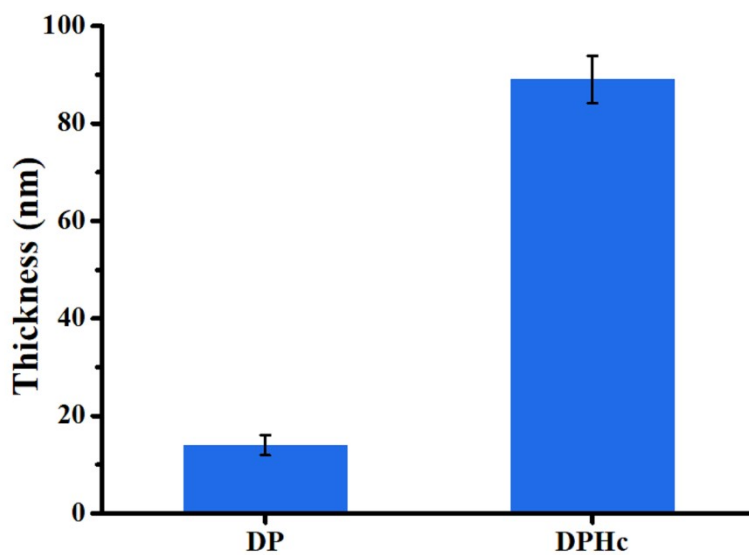


Fig. S3. The thickness of DP and DPHc coatings.

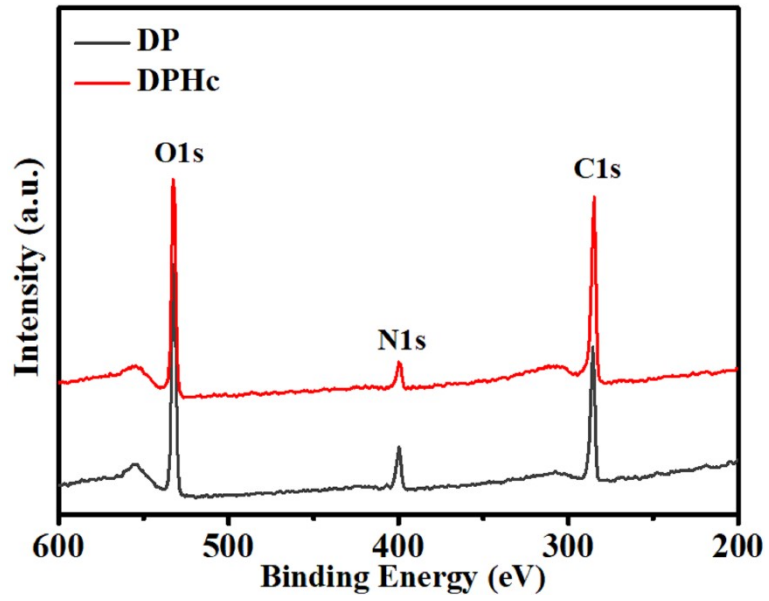


Fig. S4: The XPS spectra of the DP and DPHc coatings.

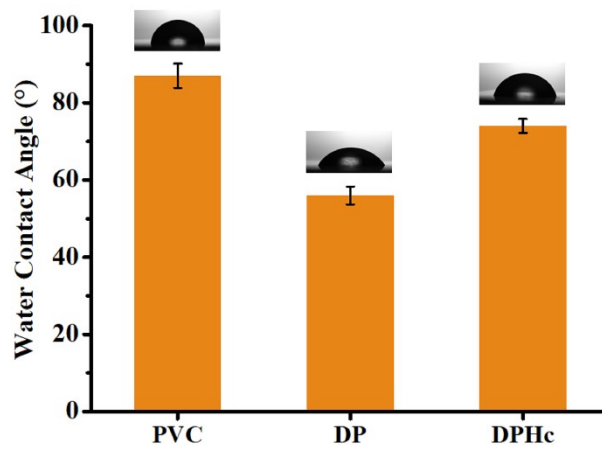


Fig. S5: The water contact angle of PVC and PVC modified with DP and DPHc coatings.

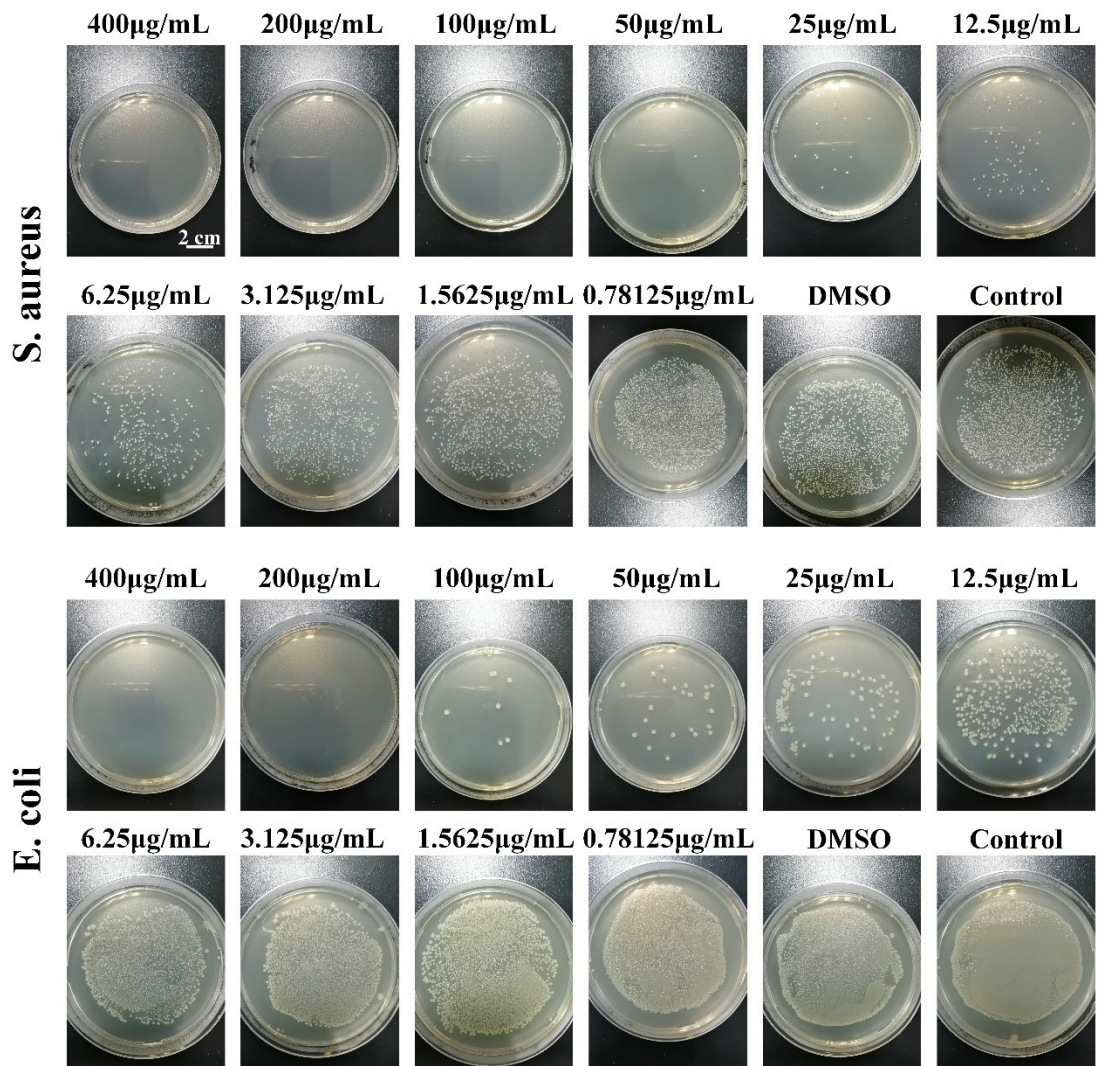


Fig. S6. Representative photographs of *S. aureus* and *E. coli* colonies cultured with different concentrations of the HK.

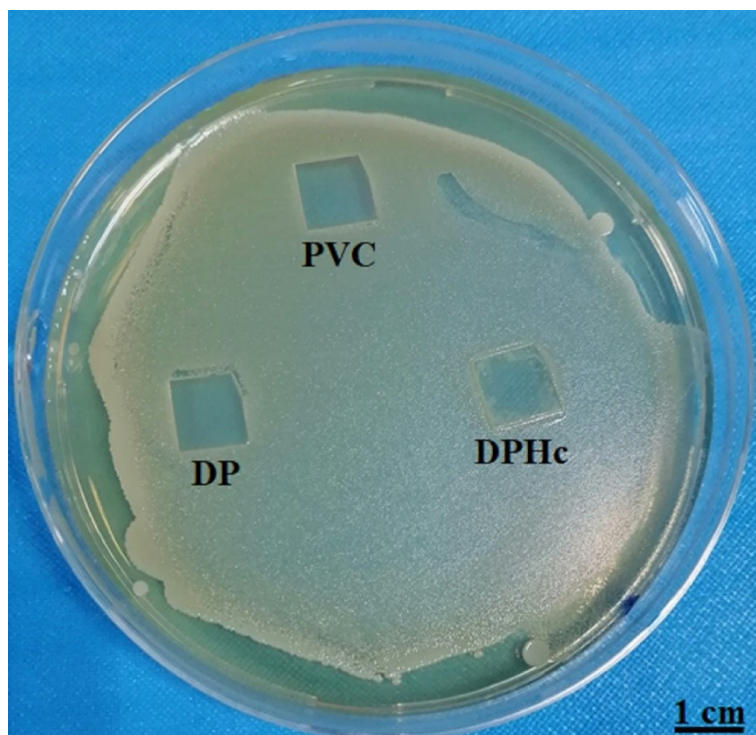


Fig. S7: ‘Zone inhibition’ of *S. aureus* cultured with different samples.

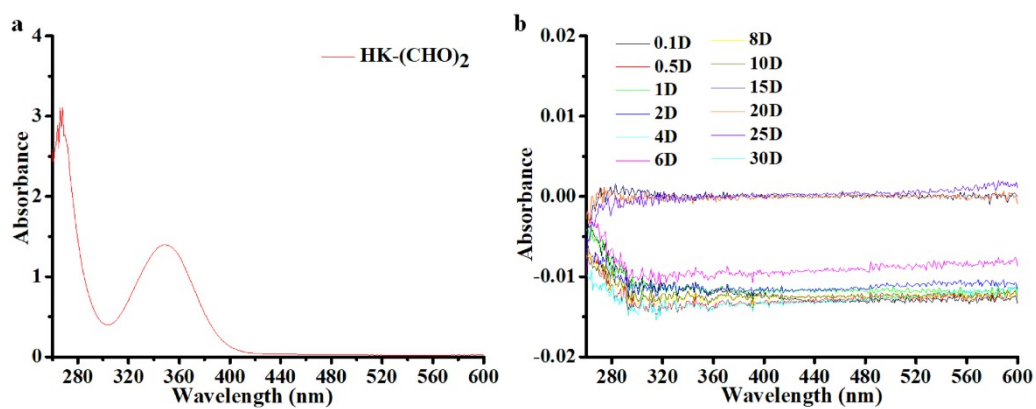


Fig. S8: The UV-vis spectra of HK-(CHO)₂ dissolved in DMSO solution (a) and released solutions of DPHc coating at different times (b).

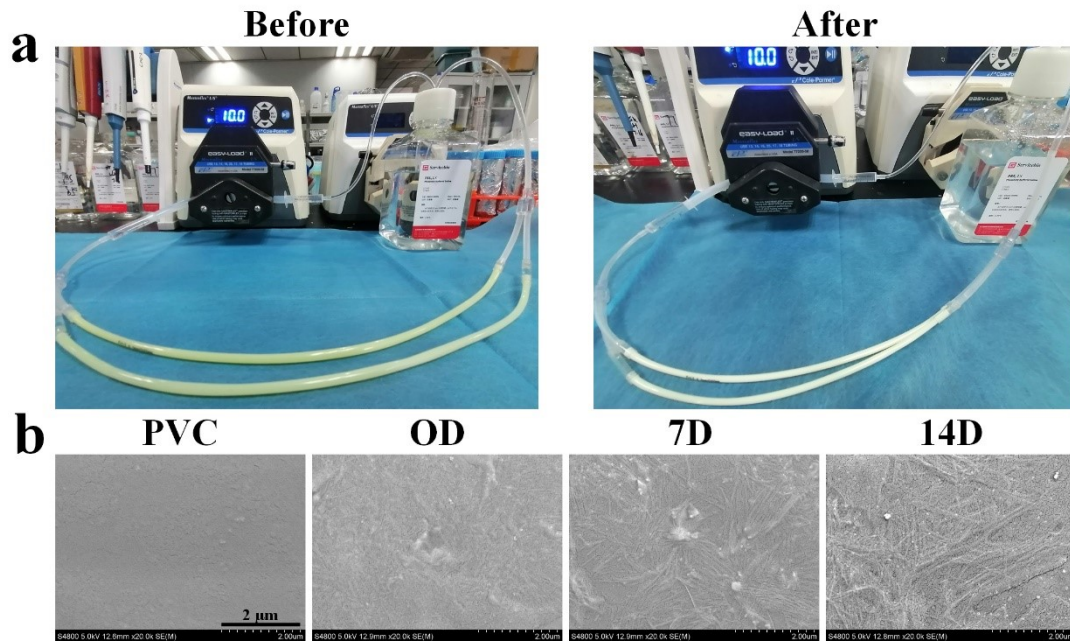


Fig. S9: (a) Photographs of PVC tubes before and after PBS solution washing. (b) SEM images of the inner surface after washing with PBS solution for 7 days and 14 days.

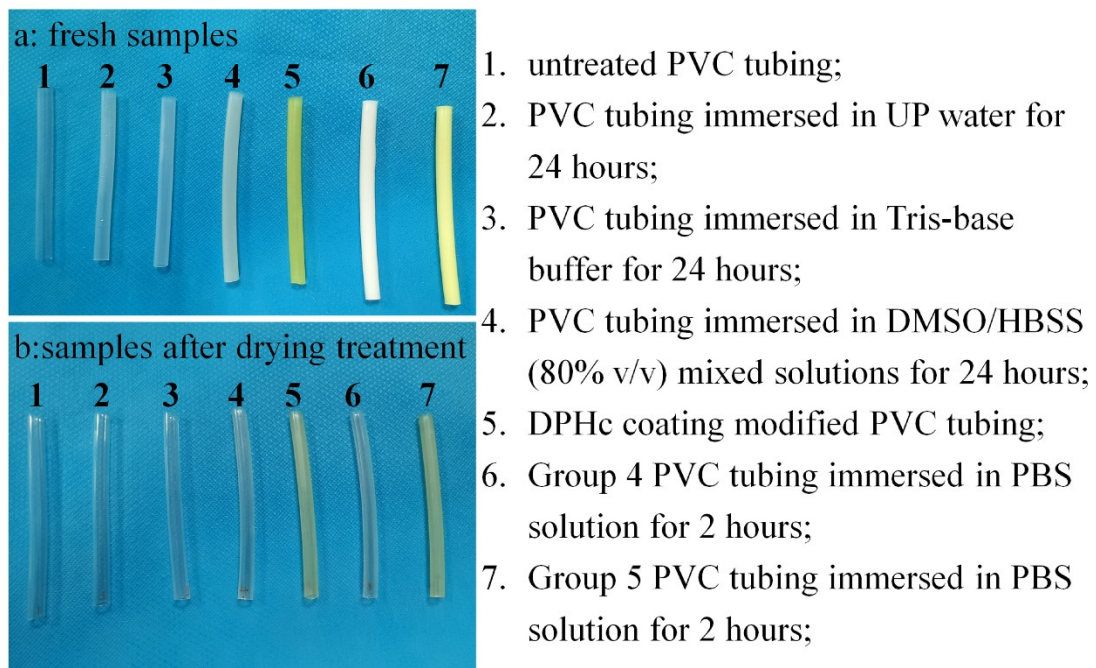


Fig. S10. Photographs of PVC tubes after treatment with different methods. (a) Fresh and (b) fully dried samples.

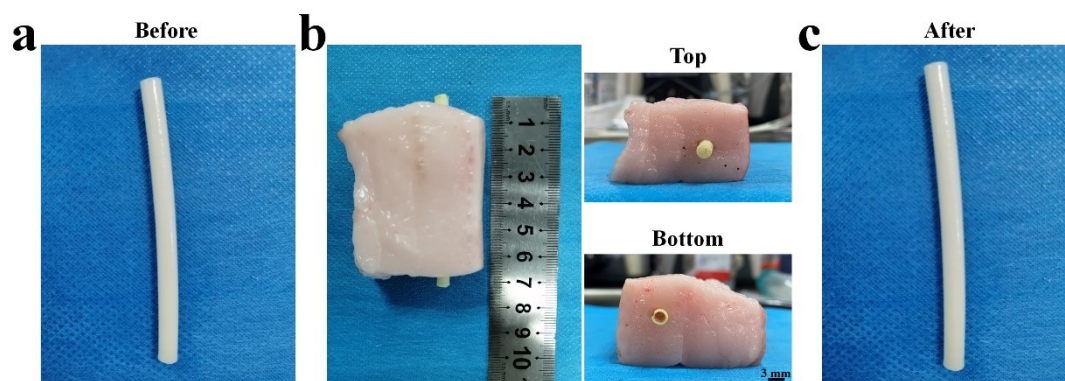


Fig. S11: (a) Photographs of DPHc coating modified PVC tube. (b) Photographs of outer surface of the tube in full contact with soft tissue. (c) Photographs of the tube after rubbing with the soft tissue 50 times.

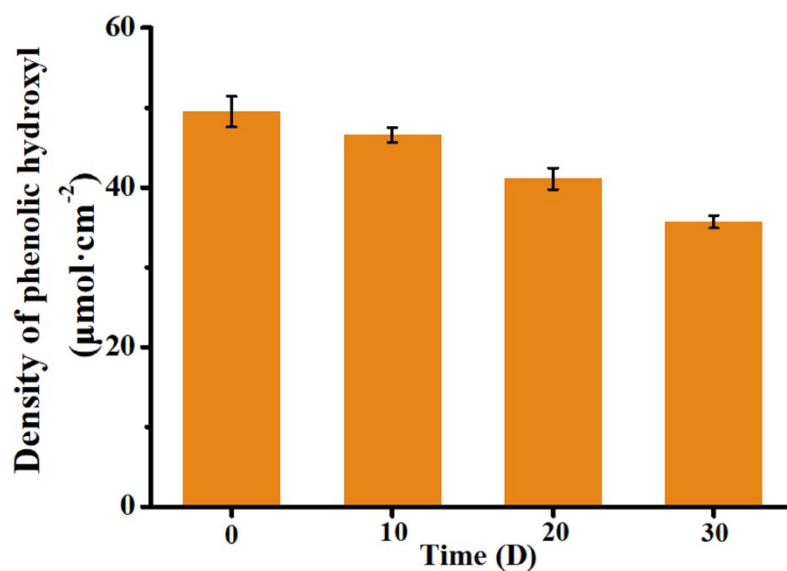


Fig. S12. Phenolic hydroxyl density of DPHc coating after 10, 20 and 30 days of immersion in PBS solution.

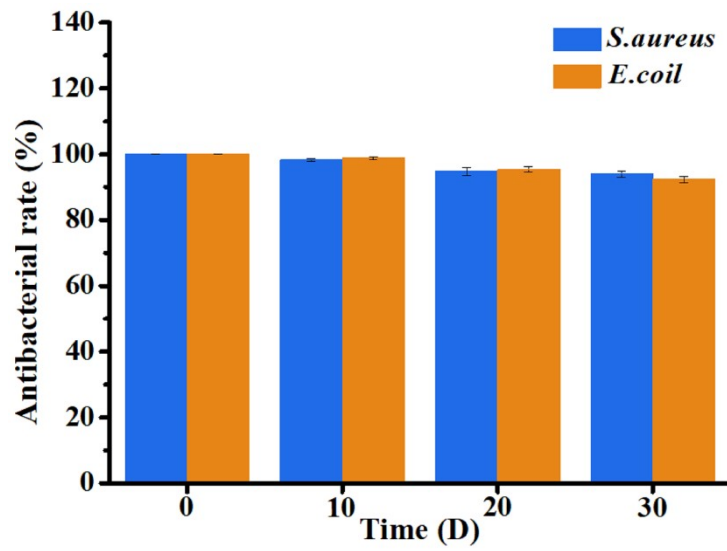


Fig. S13: The antibacterial rate of *S. aureus* and *E. coli* after soaking in PBS solution for 0, 10, 20 and 30 days.

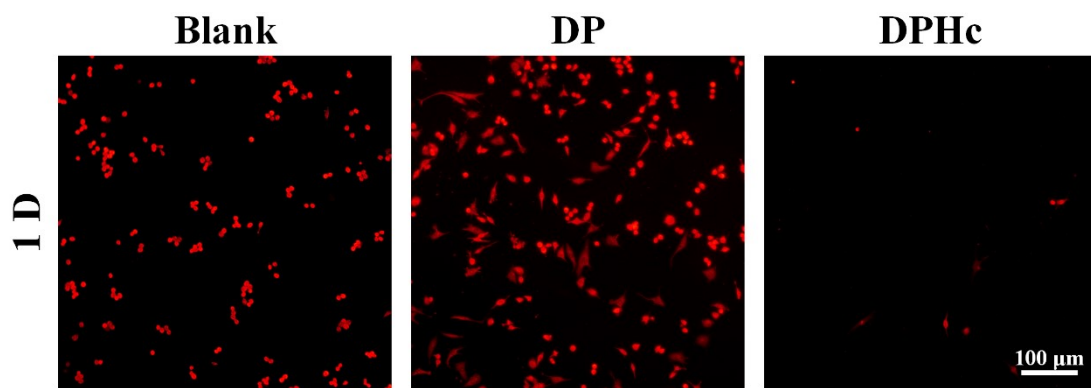


Fig. S14: The cell fluorescein stain images of macrophages on different samples of 1 day.