

A multifunctional chitosan–polylevodopa hydrogel for photothermal treatment of methicillin-resistant *Staphylococcus aureus*-infected wounds

Supplementary File

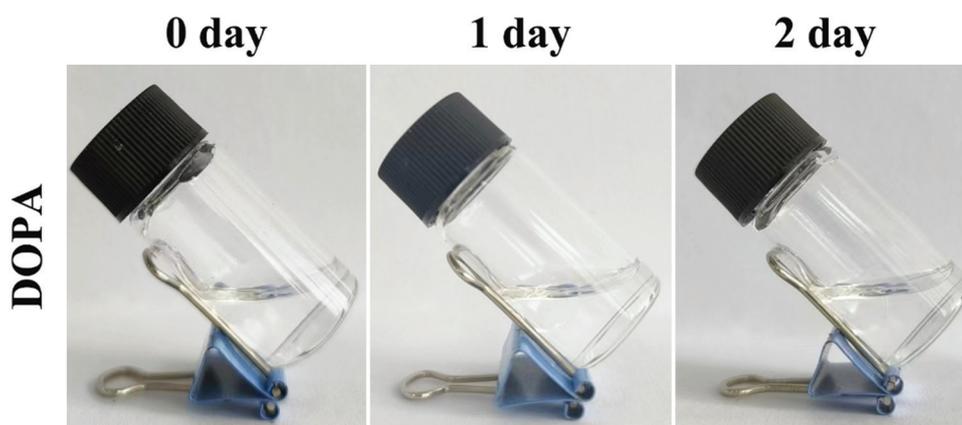


Figure S1. Representative photos during the 3,4-dihydroxyphenylalanine (DOPA) reaction process

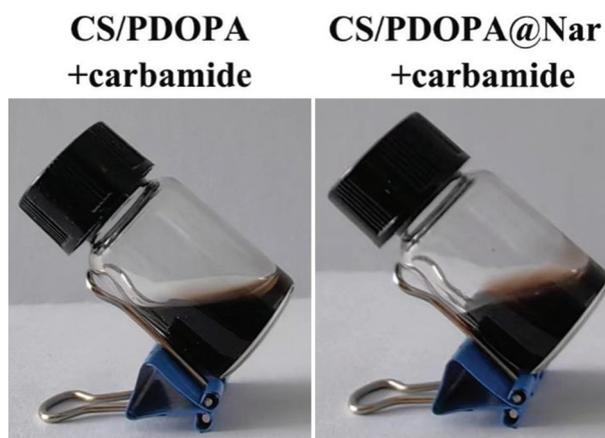


Figure S2. Photographs of CS/PDOPA and CS/PDOPA@Nar hydrogels with the addition of carbamide (1 M)

Abbreviations: CS: Chitosan; Nar: Naringin; PDOPA: Poly(3,4-dihydroxyphenylalanine).

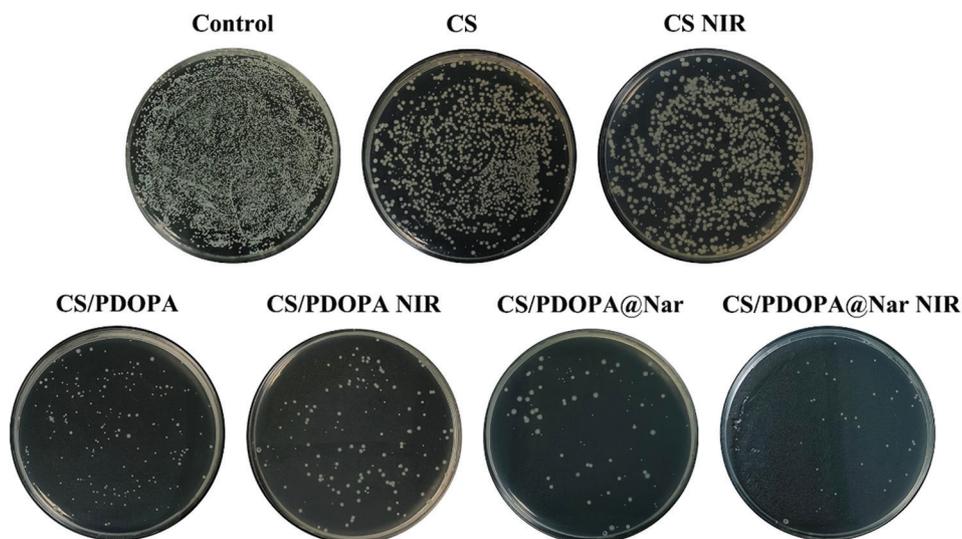


Figure S3. *In vivo* antibacterial activity of different treatment groups
Abbreviations: CS: Chitosan; Nar: Naringin; NIR: Near-infrared; PDOPA: Poly(3,4-dihydroxyphenylalanine).

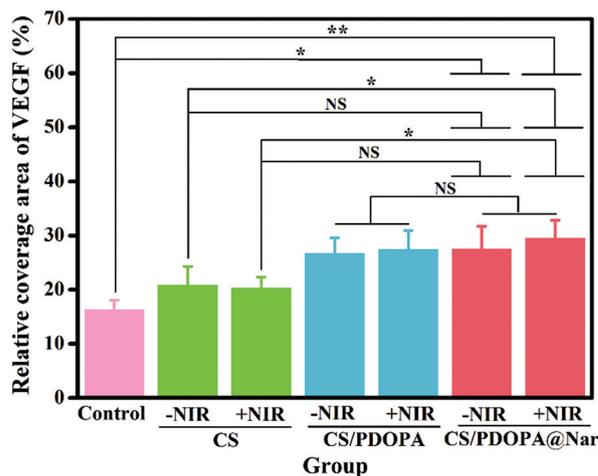


Figure S4. Quantitative analysis of the relative coverage area of VEGF. NS refers to not significant. Statistical significance determined at $*p < 0.05$ and $**p < 0.01$.
Abbreviations: CS: Chitosan; Nar: Naringin; NIR: Near-infrared; PDOPA: Poly(3,4-dihydroxyphenylalanine); VEGF: Vascular endothelial growth factor.

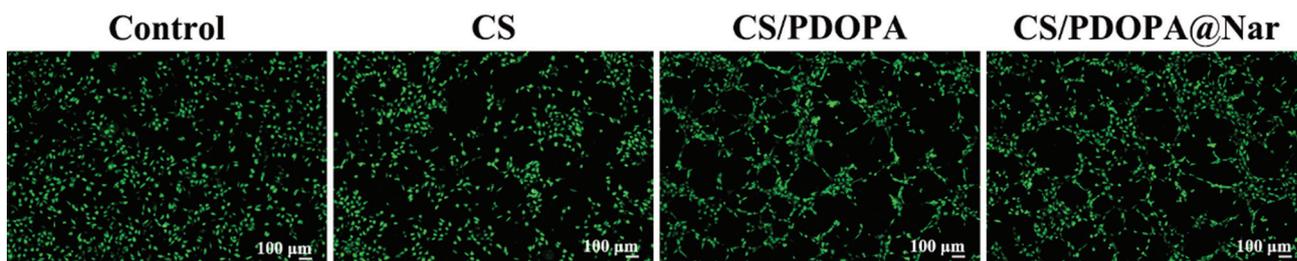


Figure S5. Representative calcein acetoxyethyl ester staining fluorescent images of human umbilical vein endothelial cell tube formation after treatment with different groups. Scale bar: 50 μm; magnification: 5×.
Abbreviations: CS: Chitosan; Nar: Naringin; PDOPA: Poly(3,4-dihydroxyphenylalanine).

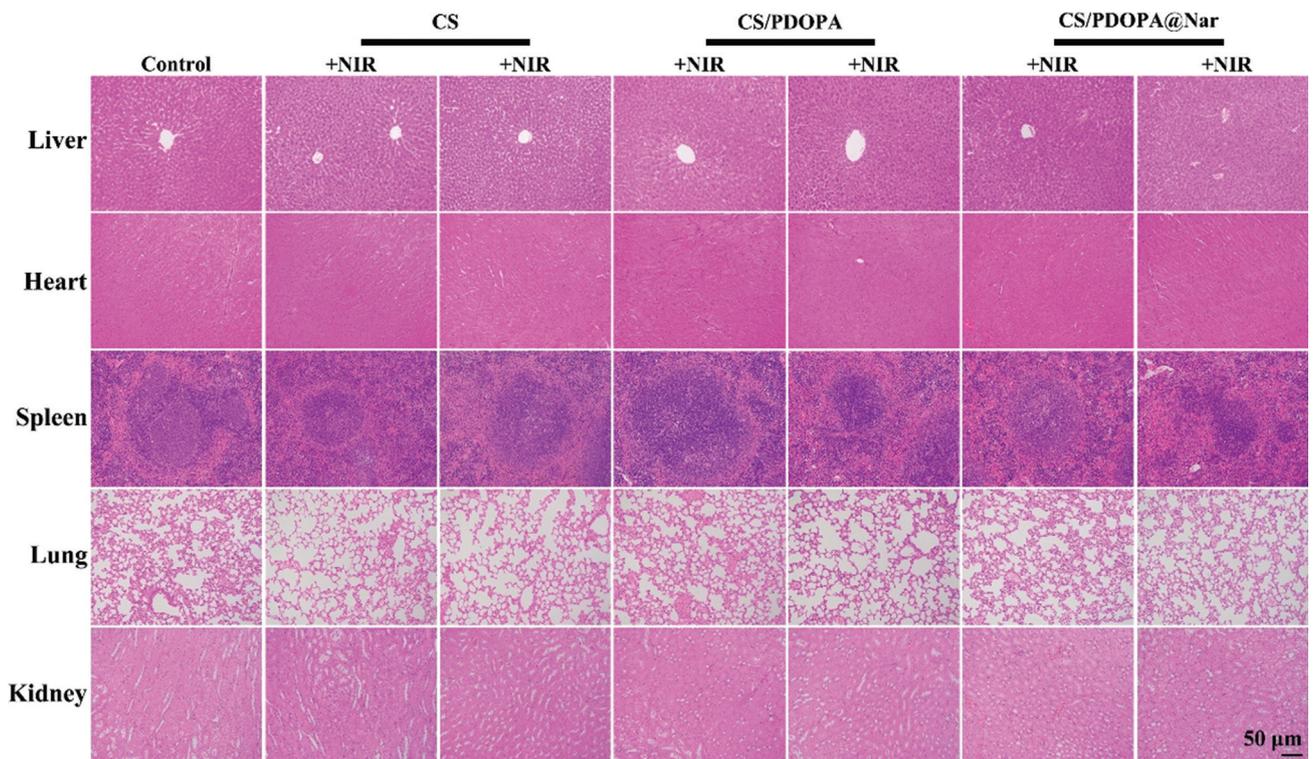


Figure S6. Hematoxylin and eosin staining of major organs of mice after different treatment groups. Scale bar: 50 μ m; magnification: 40 \times . Abbreviations: CS: Chitosan; Nar: Naringin; NIR: Near-infrared; PDOPA: Poly(3,4-dihydroxyphenylalanine).

Video S1. Injectability video of CS/PDOPA hydrogel.

Abbreviations: CS: Chitosan; PDOPA: Poly(3,4-dihydroxyphenylalanine).

Video S2. Injectability video of CS/PDOPA@Nar hydrogel.

Abbreviations: CS: Chitosan; Nar: Naringin; PDOPA: Poly(3,4-dihydroxyphenylalanine).

Table S1. Formulations of hydrogels

Name	DOPA	DOPA	DOPA
CS (25 mg/mL)	1 mg	5 mg	10 mg
CS/PDOPA hydrogel photos			

Abbreviations: CS: Chitosan; DOPA: 3,4-dihydroxyphenylalanine; PDOPA: Poly(3,4-dihydroxyphenylalanine)