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Supporting Information

Nanoparticles/thermosensitive hydrogel reinforced with chitin

whiskers as wound dressing for treating chronic wounds

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Abbreviation:

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CW/NPs/HBC-HG: hydrogels containing CWs, rhEGF-loaded CMCS NPs, linezolid and HBC;

NPs/HBC-HG: hydrogels containing rhEGF-loaded CMCS NPs, linezolid and HBC;

CW/HBC-HG: hydrogels containing CWs, linezolid and HBC;

CW/NPs/HBC-HG (rhEGF⁻): hydrogels containing CWs, CMCS NPs, linezolid and HBC;

CW/NPs/HBC-HG (linezolid⁻): hydrogels containing CWs, rhEGF-loaded CMCS NPs and HBC.



Fig. S1. SEM images of hydrogels. (a) HBC-HG, (b) NPs/HBC-HG, (c) CW(0.25%)/NPs/HBC-HG, (d) CW(0.5%)/NPs/HBC-HG, (e) CW(1%)/NPs/HBC-HG and (f) CW(2%)/NPs/HBC-HG. Scale bar 100 mm.



Fig. S2. FTIR spectra of HBC, CW/HBC, NPs/HBC and CW/NPs/HBC-HG.



Fig. S3. Temperature dependence of the storage modulus G' and loss modulus G'' for HBC and NPs/HBC suspensions.



Fig. S4 Temperature dependence of the storage modulus G' and loss modulus G'' for CW/NPs/HBC suspensions with different CWs and HBC concentrations.



Fig. S5. Cell viability measured by MTT assay for CW/NPs/HBC-HG extract of different concentrations after 24, 48 and 72 h of incubation. The results were expressed as mean \pm SD (n = 5).



Fig. S6 *In vitro* cytotoxicity of linezolid solutions at different concentrations. The results were expressed as mean \pm SD (n = 5, *p < 0.05).



Fig. S7. The inhibition rates of linezolid solutions at different concentrations against *E. coli, S. aureus* and *Monilia albican*.



Fig. S8. TEM images of the rhEGF-loaded CMCS NPs