

Supplementary Information

Multifunctional shape-adaptive and biodegradable hydrogel with hemorrhage control and broad-spectrum antimicrobial activity for wound healing

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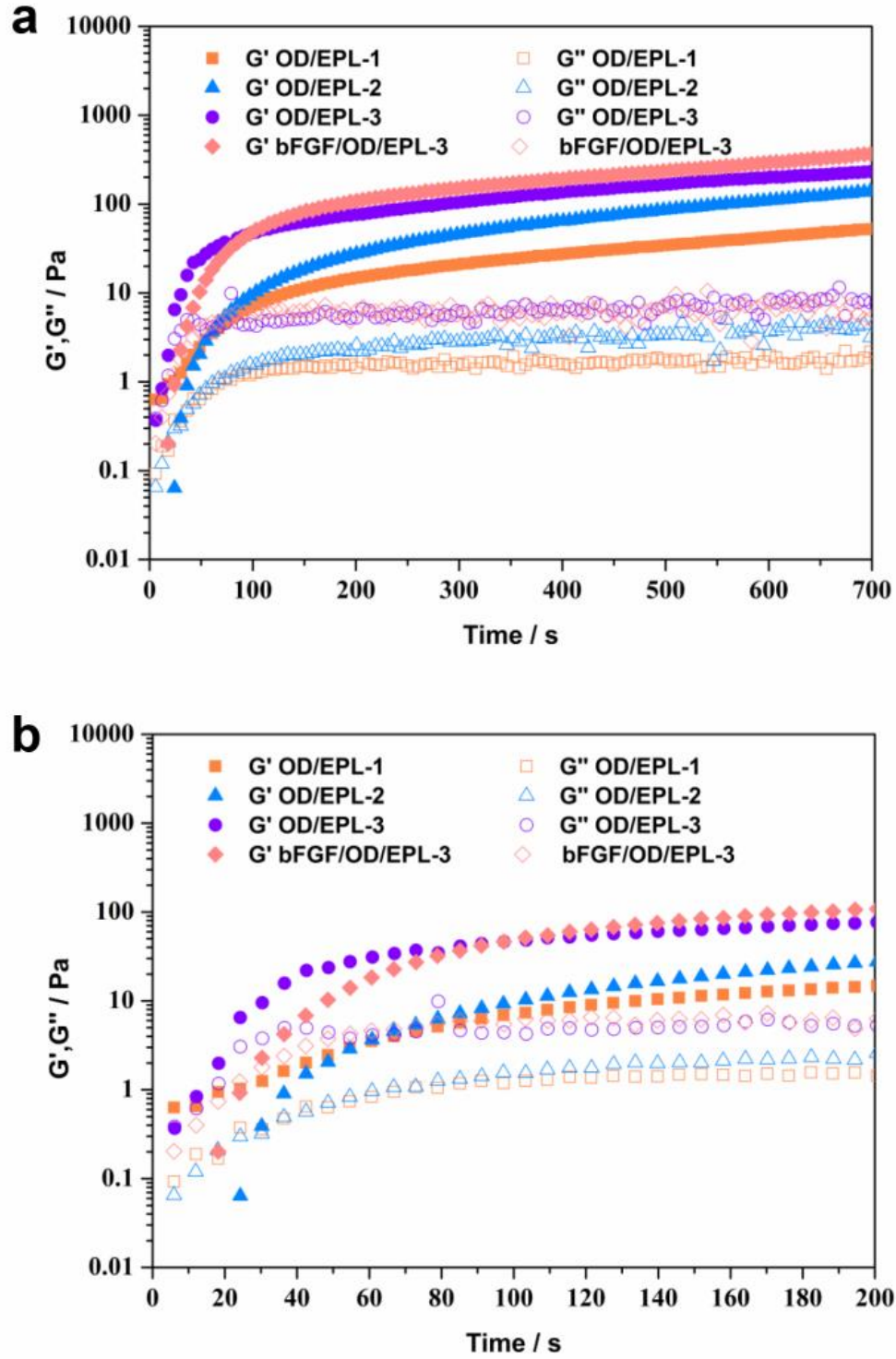


Figure S1. G' and G'' of OD/EPL hydrogels with time (a) 0–700 s and (b) 0–200 s.

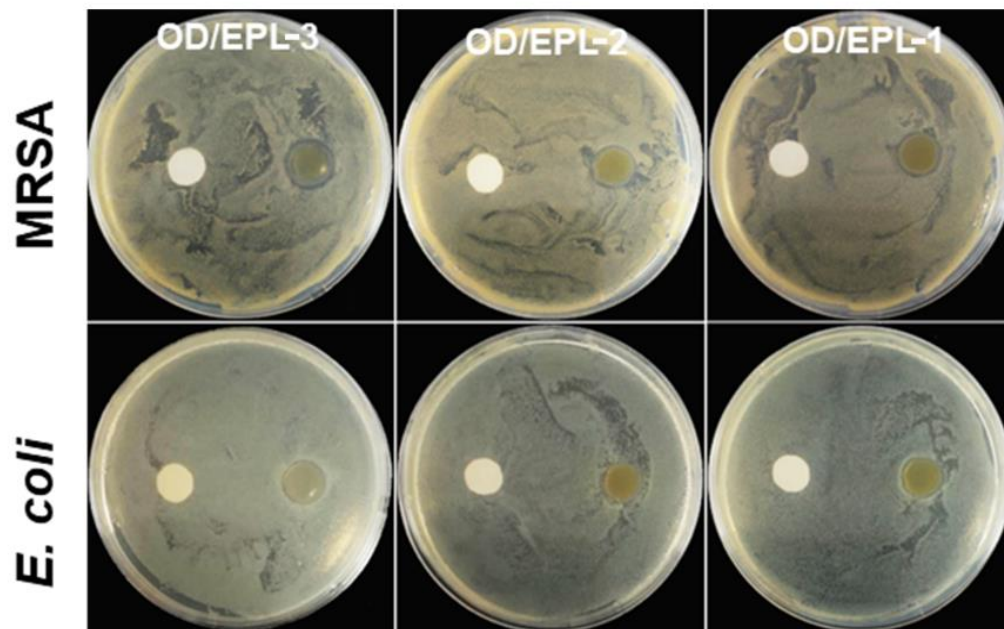


Figure S2. Photograph of inhibition zone of OD/EPL hydrogels against MRSA and *E. coli*.

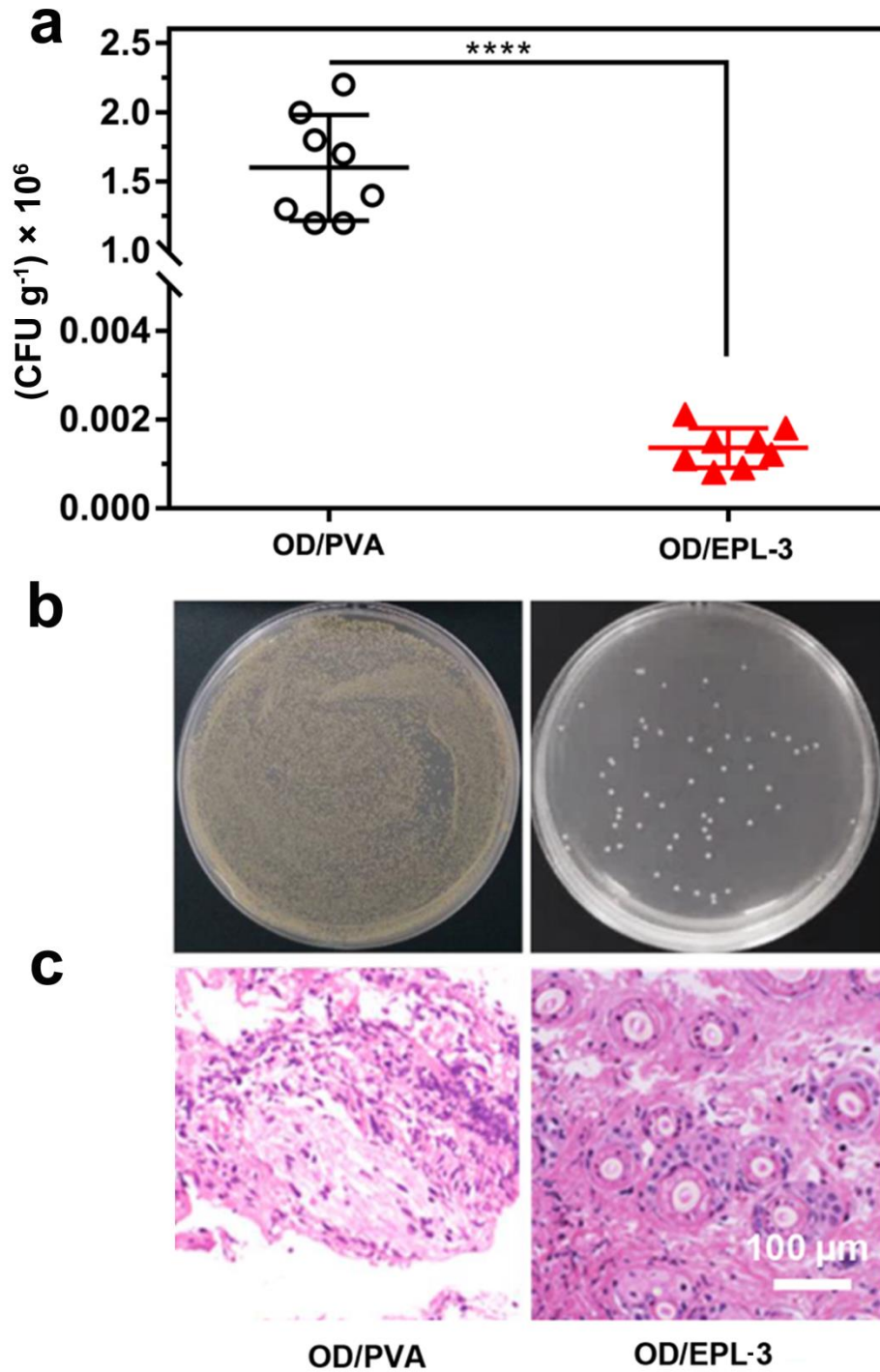


Figure S3. *In vivo* antibacterial activity against MRSA in a mouse subcutaneous model. (a) Bacterial colony count (CFU) at infectious sites treated with control OD/PVA hydrogel and OD/EPL-3 hydrogel (***) $p < 0.001$). (b) Optical images of survival bacterial colonies on the infectious sites. (c) H&E staining images of the tissue adjacent to OD/PVA, OD/EPL-3 hydrogel at day 1 after implantation.

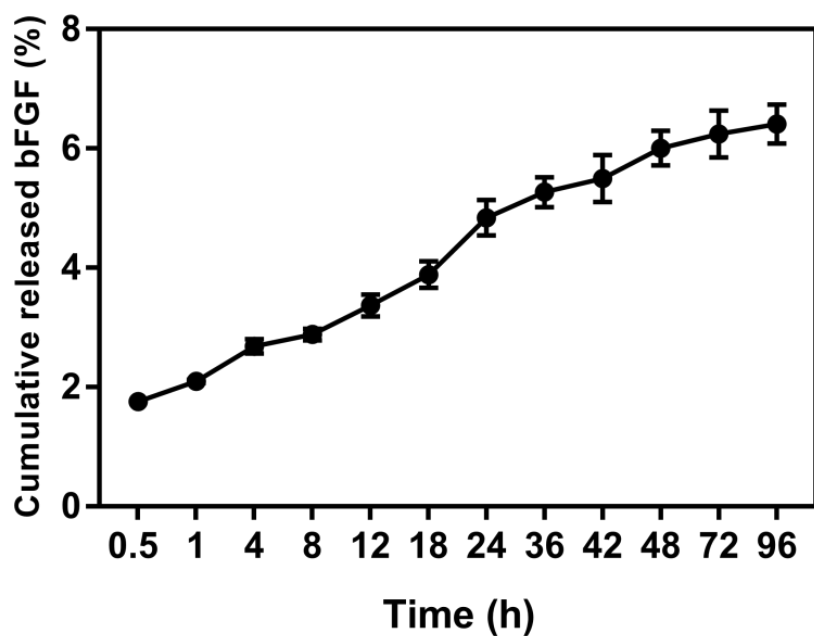


Figure S4. Release profiles of bFGF from bFGF/OD/EPL-3 hydrogel. Results are expressed as the cumulative percentage release during 96 h of bFGF, relative to its total amount incorporated in the hydrogel.

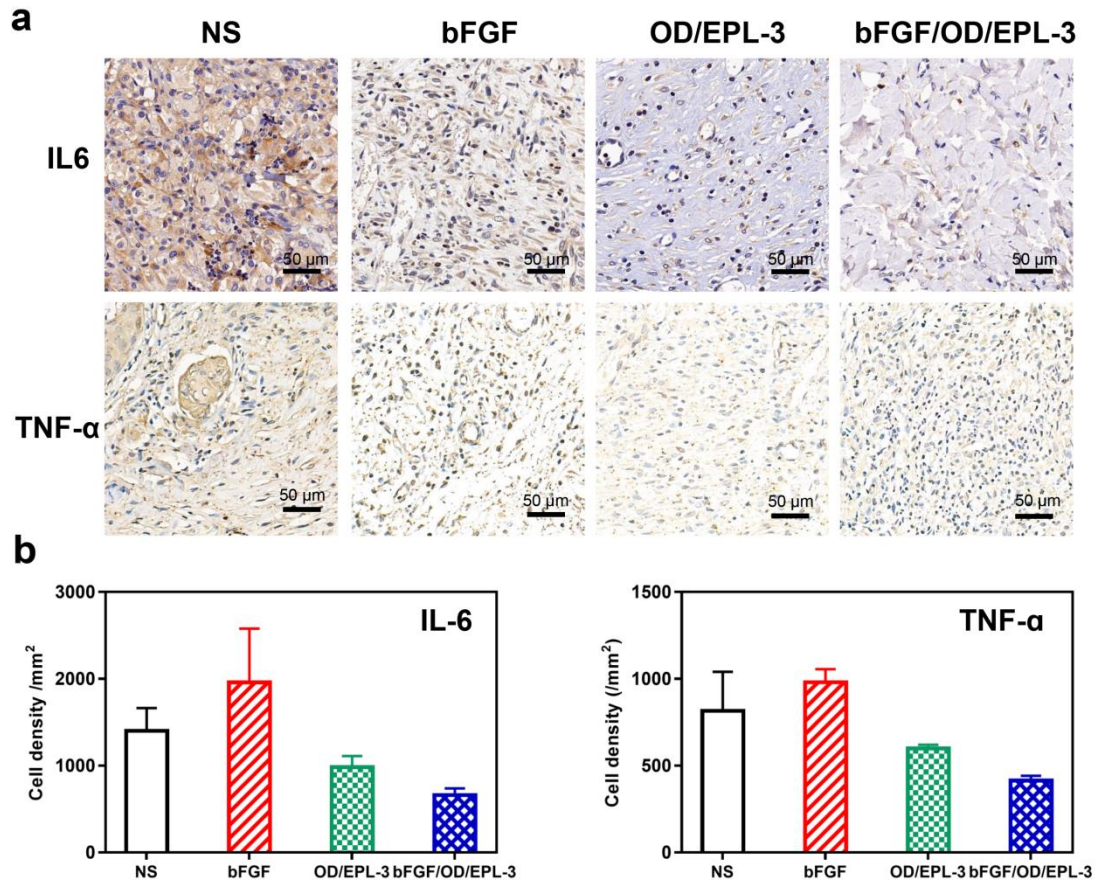


Figure S5. (a) Immunohistochemical (IL-6 and TNF- α) staining images, and (b) Quantitative result of positive cell density infiltrated into the wound section at day 7 after treatment with NS, bFGF, OD/EPL-3 and bFGF/OD/EPL-3 hydrogels.

Table S1. The MIC values of EPL against various bacteria.

Microorganism	MIC ($\mu\text{g mL}^{-1}$)
MRSA	4
<i>E. coli</i>	8
<i>P. aeruginosa</i>	8