Supporting information

Photo-cleavable polyprodrug-loaded wound dressing with UV-responsive antibacterial property

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1. Synthesis and characterization of HMNB-PEG-HMNB

0.3g HMNB was dissolved in 4 ml NMP under an atmosphere of N_2. After that, a solution of PEG diamine (0.5g) in NMP (4ml) was added dropwise. The mixture solution was intermittently vortexed and stirred until all reactants completely dissolved. The reaction was stirred for 12 h in dark at room temperature. Then, 10 times volume diethyl ether was used to precipitate the product at 0 ºC. The precipitate was collected and washed with ether for three times. To further purify the product, the product was dried under vacuum and then redissolved in distilled water. The solution was dialyzed against distilled water in a dialysis tube (MWCO: 1000) for three days and lyophilized to obtain HMNB-PEG-HMNB. The conjugation degree of HMNB to PEG diamine was estimated from ^{1}H NMR ($(CD_3)_2SO$ with TMS) spectra from the peaks at δ 3.4 ppm [CH in H_2N-PEG-NH_2] and δ7.35 ppm [CH in HMNB].

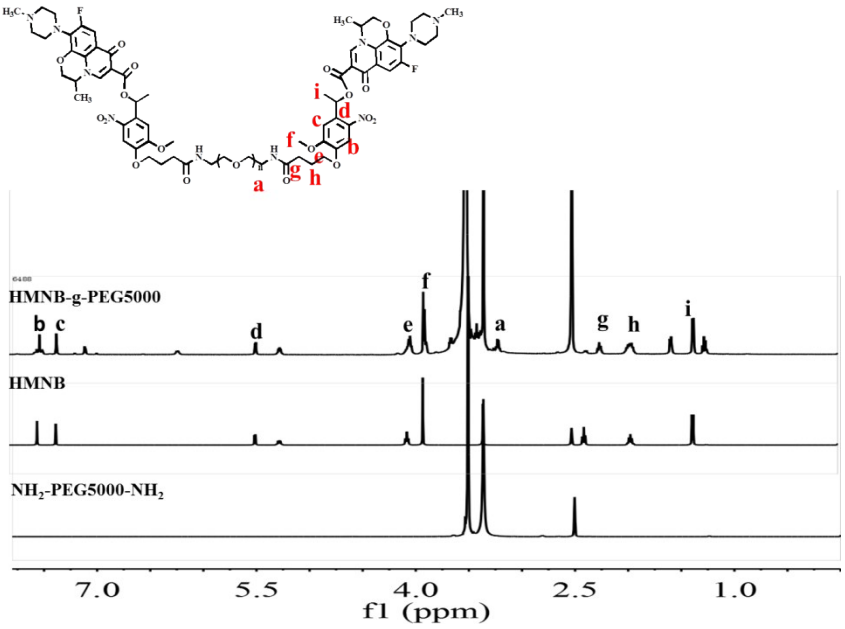

Fig. S1.[1]H NMR spectra (D_2O with TMS) of HMNB-PEG-HMNB

2. The photo-cleavage reaction of LHP traced by UV-Vis spectra.

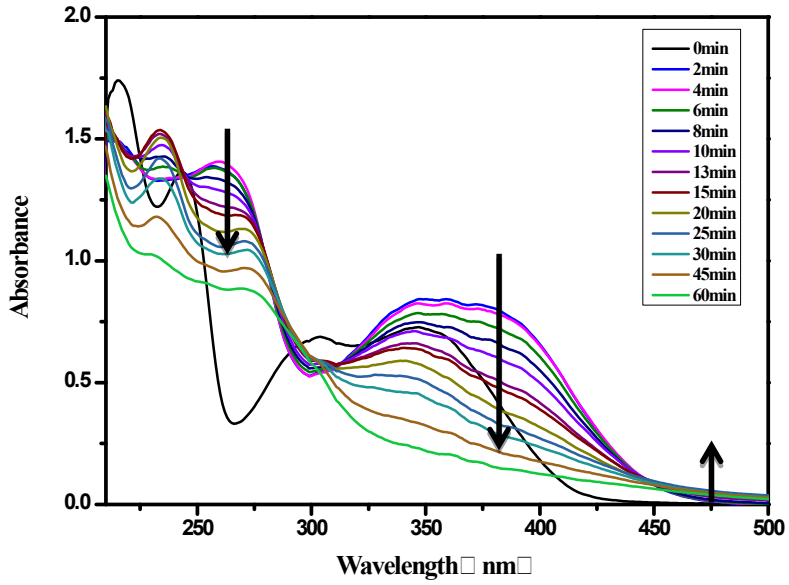

Fig. S2. UV-vis absorbance spectra of LHP with different UV irradiation time

Fig. S3. Inhibition zones of the LF-loaded PVA/SA wound dressing cultured for 24h