Supporting information for

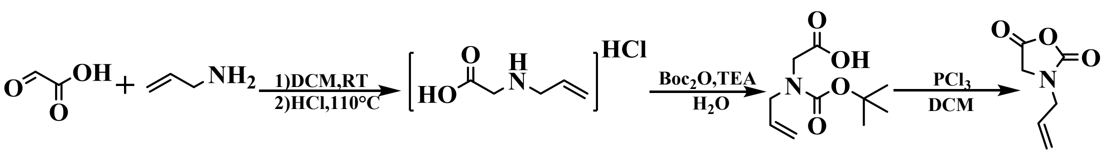
A Convenient Approach for Antibacterial Polypeptoids Featuring Sulfonium and oligo(ethylene glycol) Subunits

*Bo Zhang[1], Min Li[1], Min Lin[1], Xuan Yang[2], Jing Sun[1]**

[1]Key Laboratory of Biobased Polymer Materials, College of Polymer Science and Engineering, Qingdao University of Science and Technology, Qingdao, 266042, China

[2]Shandong Peninsula Engineering Research Center of Comprehensive Brine Utilization, Weifang University of Science and Technology, Shouguang, Weifang, 262700, China

Scheme S1. Synthetic Pathways of Allyl-NCA monomers.



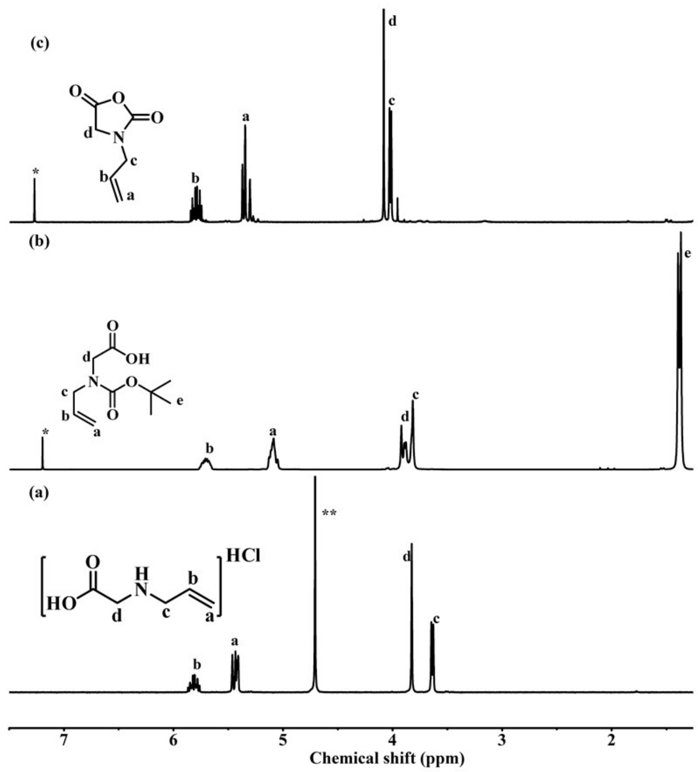


Fig. S1. [1]H NMR spectra of (a) 2-(Allylamino) acetic Acid Hydrochloride in D_2O, (b) 2-(Allyl(tert-butoxycarbonyl) amino) acetic Acid in $CDCl_3$, (c) allylamine-NCA in $CDCl_3$ (* indicates $CDCl_3$, ** indicates D_2O).

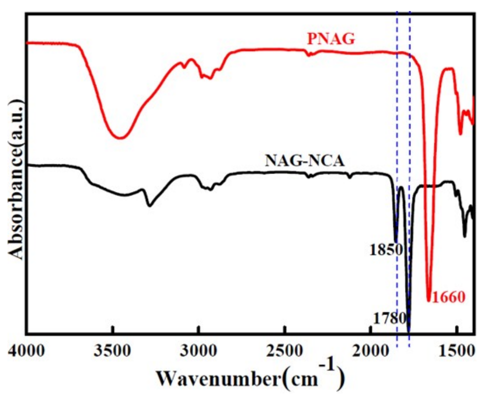


Fig. S2. FTIR spectrums of NAG-NCA and PNAG.

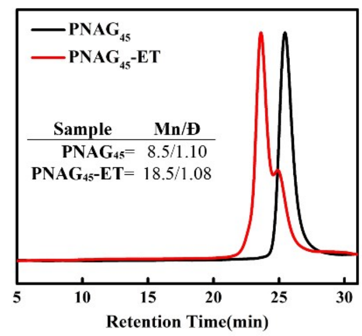


Fig S3. Representative GPC chromatograms of $PNAG_{45}$ and $PNAG_{45}$-ET.

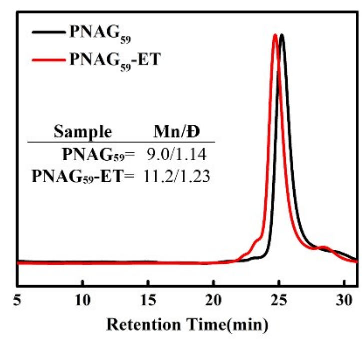


Fig S4. Representative GPC chromatograms of $PNAG_{59}$ and $PNAG_{59}$-ET.

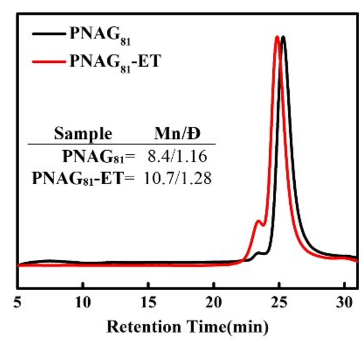


Fig S5. Representative GPC chromatograms of $PNAG_{81}$ and $PNAG_{81}$-ET.

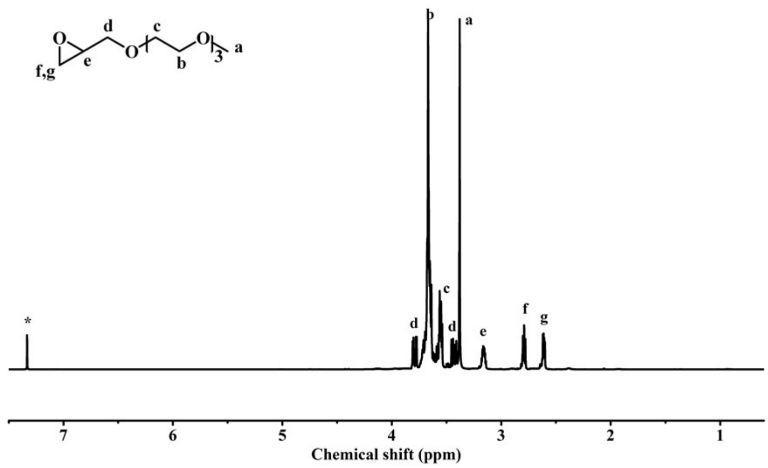


Fig. S6. Representative [1]H NMR spectrum of epoxide terminated triethylene glycol (OEG_3) in $CDCl_3$ (* indicates $CDCl_3$).

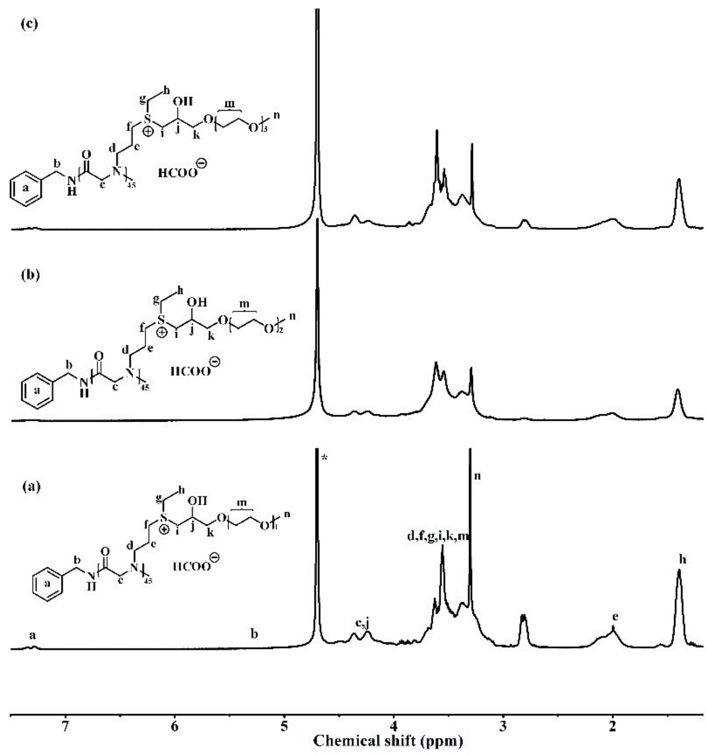


Fig. S7. [1]H NMR spectra of (a) $PNAG_{45}$-ET-OEG_1 , (b) $PNAG_{45}$-ET-OEG_2 and (c) $PNAG_{45}$-ET-OEG_3 in D_2O (* indicates D_2O). (Feed molar ratio of NCA/initiator of the precursor polymer $PNAG_{45}$ is 40; DP is 45, determined by [1]HNMR spectra.)

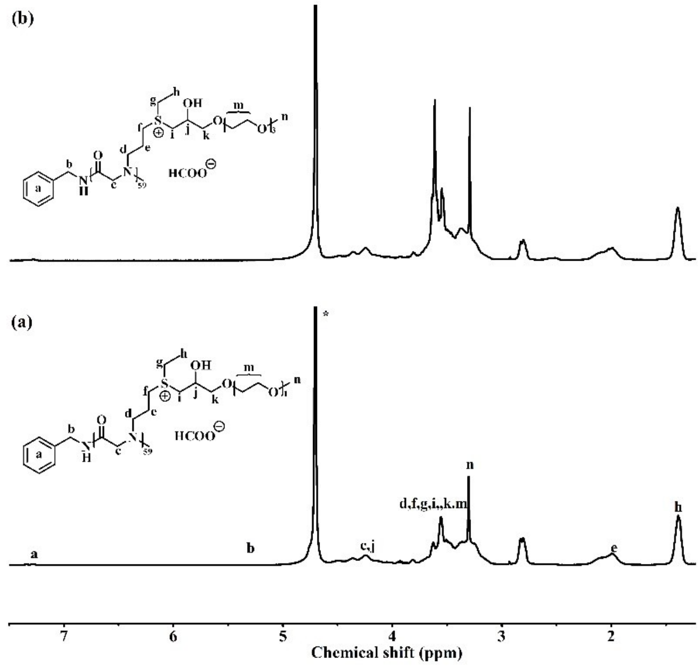


Fig. S8. [1]H NMR spectra of (a) $PNAG_{59}$-ET-OEG_1 and (b) $PNAG_{59}$-ET-OEG_3 in D_2O (* indicates D_2O).

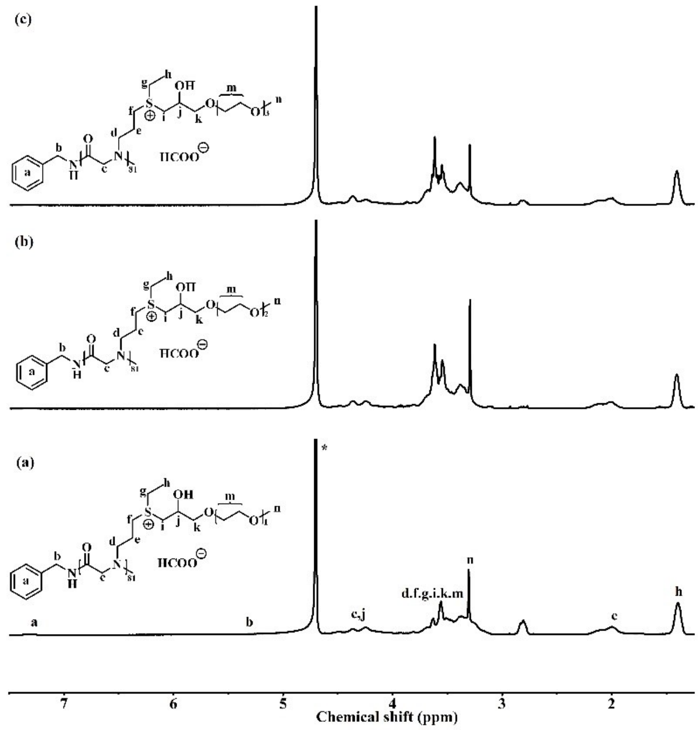


Fig. S9. [1]H NMR spectra of (a) $PNAG_{81}$-ET-OEG_1, (b) $PNAG_{81}$-ET-OEG_2 and (c) $PNAG_{81}$-ET-OEG_3 in D_2O (* indicates D_2O). (Feed molar ratio of NCA/initiator of the precursor polymer $PNAG_{81}$ is 80; DP is 81, determined by [1]HNMR spectra.)