

Supplementary Information

Fabrication of Bis-Quaternary Ammonium Salt as an Efficient
Bactericidal Weapon against Escherichia coli and Staphylococcus aureus

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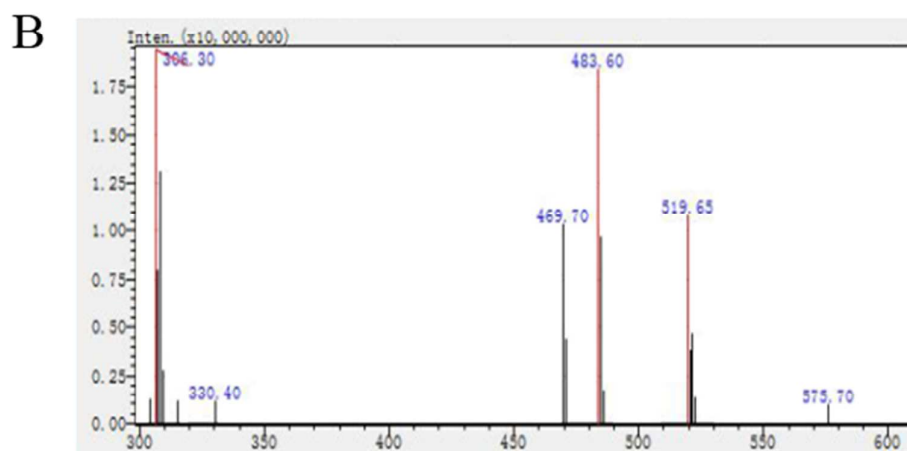
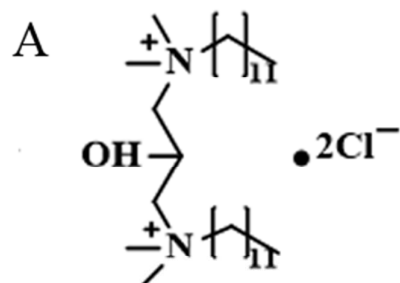


Figure S1. Structural formula (A) and MS spectrum (B) of BQAS.

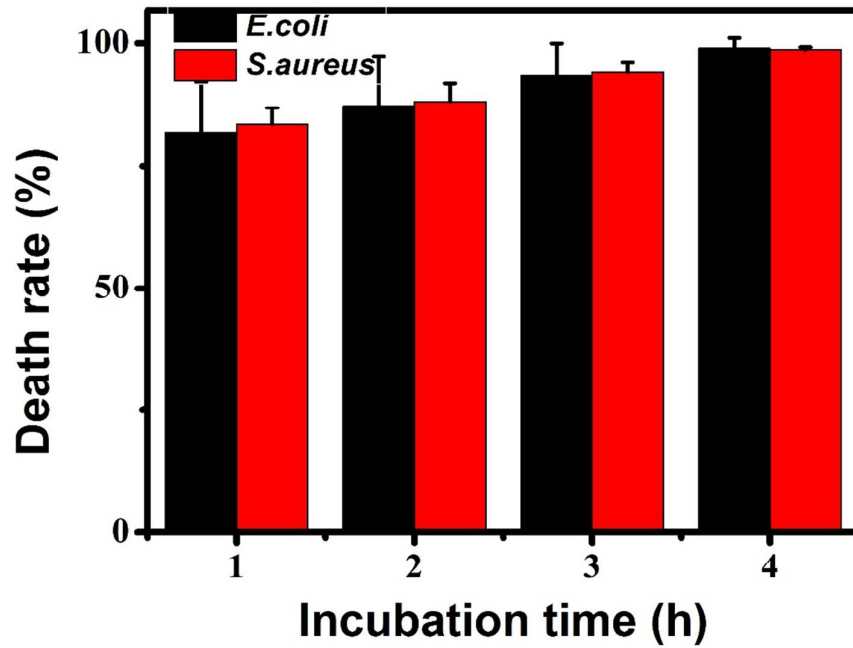


Figure S2. Effects of different incubation time on antibacterial activity of BQAS. Bacterial cells (10^8 CFU/mL) incubated with BQAS ($50 \mu\text{g/mL}$) in 1h, 2h, 3h and 4h, respectively.

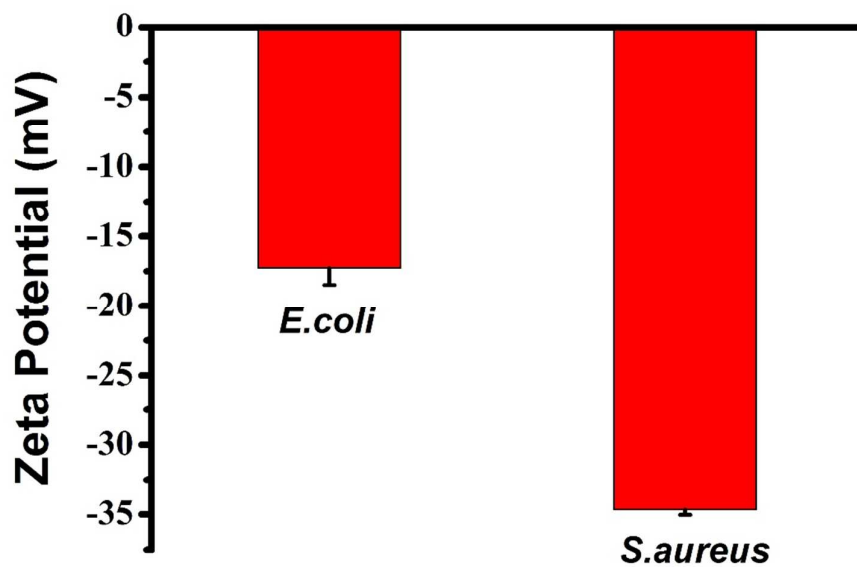


Figure S3. Zeta potential measurements of *E. coli* and *S. aureus*.

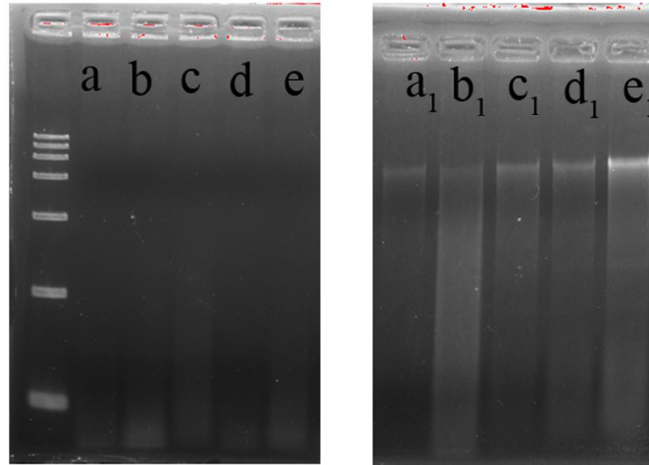


Figure S4. The DNA strides of the supernatant of bacterial cells (left: *S.aureus*, right: *E.coli*) treated with different concentrations of BQAS. a, a₁: 0 µg/mL, b, b₁: 25 µg/mL, c, c₁: 50 µg/mL; d, d₁: 100 µg/mL and e, e₁: 200 µg/mL.

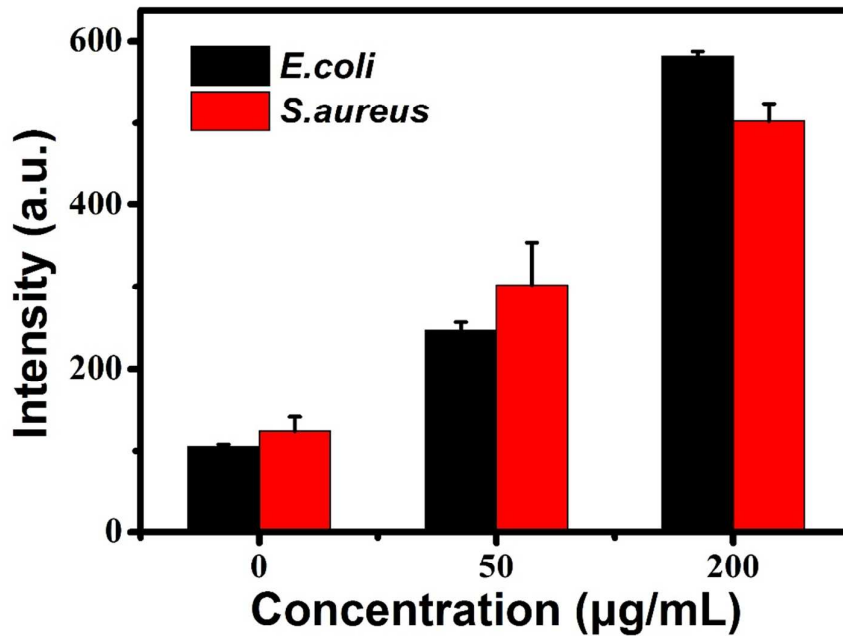


Figure S5. ROS generation after the bacterial cells (10^8 CFU/mL) incubated with BQAS at concentrations of 0 µg/mL, 50 µg/mL, and 200 µg/mL, respectively.

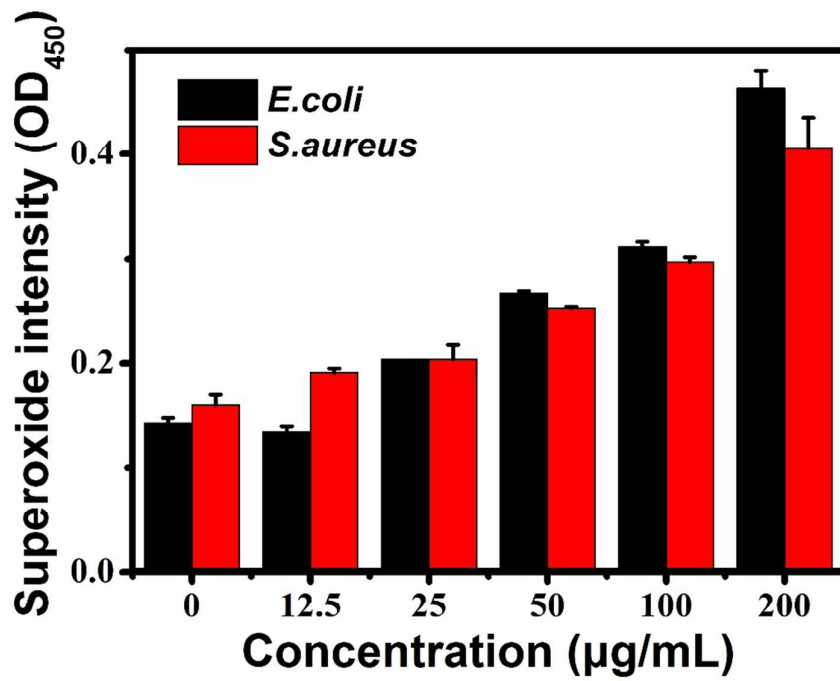


Figure S6. Intracellular superoxide levels of the cells (10^8 CFU/mL) treated with different concentrations (0-200 µg/mL) of BQAS.

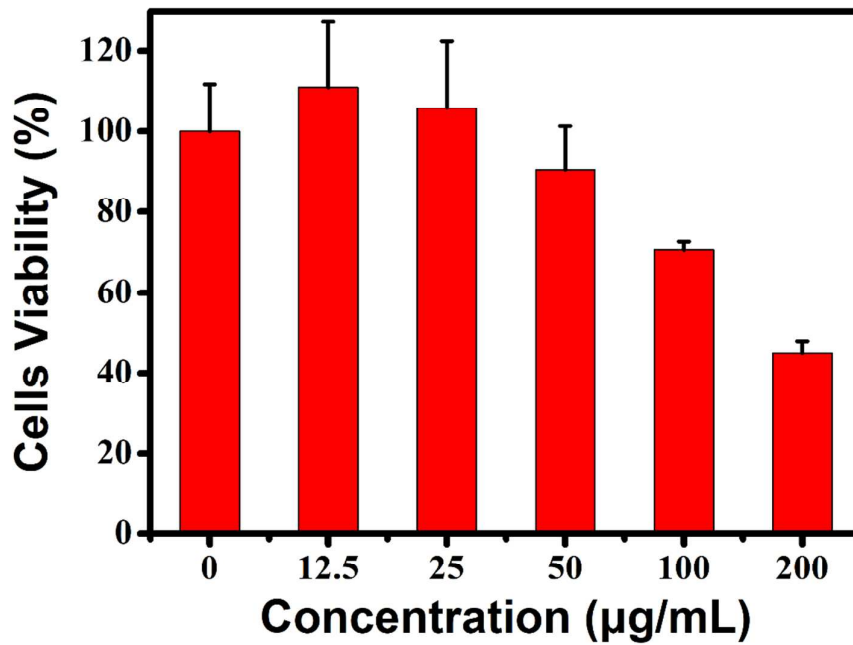


Figure S7. The cytotoxicity assay of BQAS against the 4T1 cell.