

Supplementary Materials

Combating Antibiotic Resistance Through the Synergistic Effects of Mesoporous Silica-Based Hierarchical Nanocomposites

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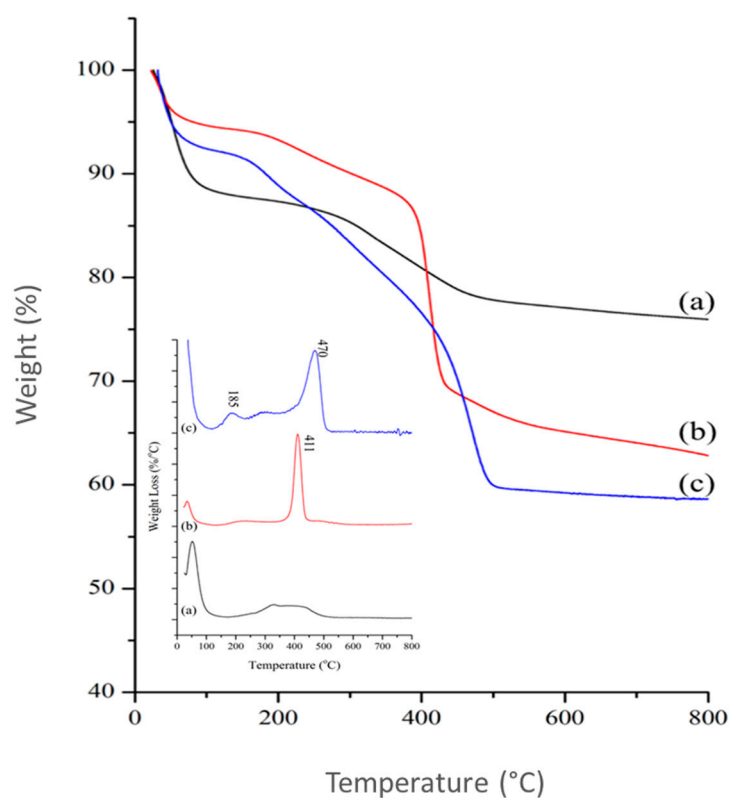


Figure S1. TGA curves of (a) Cu-MSN, (b) Cu-MSN-TET, and (c) PEI-SNP@Cu-MSN-TET. Inset showing the corresponding differential curves.

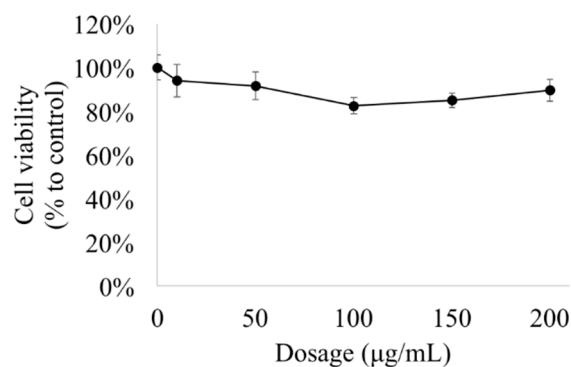


Figure S2. Biocompatibility study of PEI-SNP@Cu-MSN-TET nanoconjugates using MTT cytotoxicity assay in normal fibroblast cell line (3T3 cells).

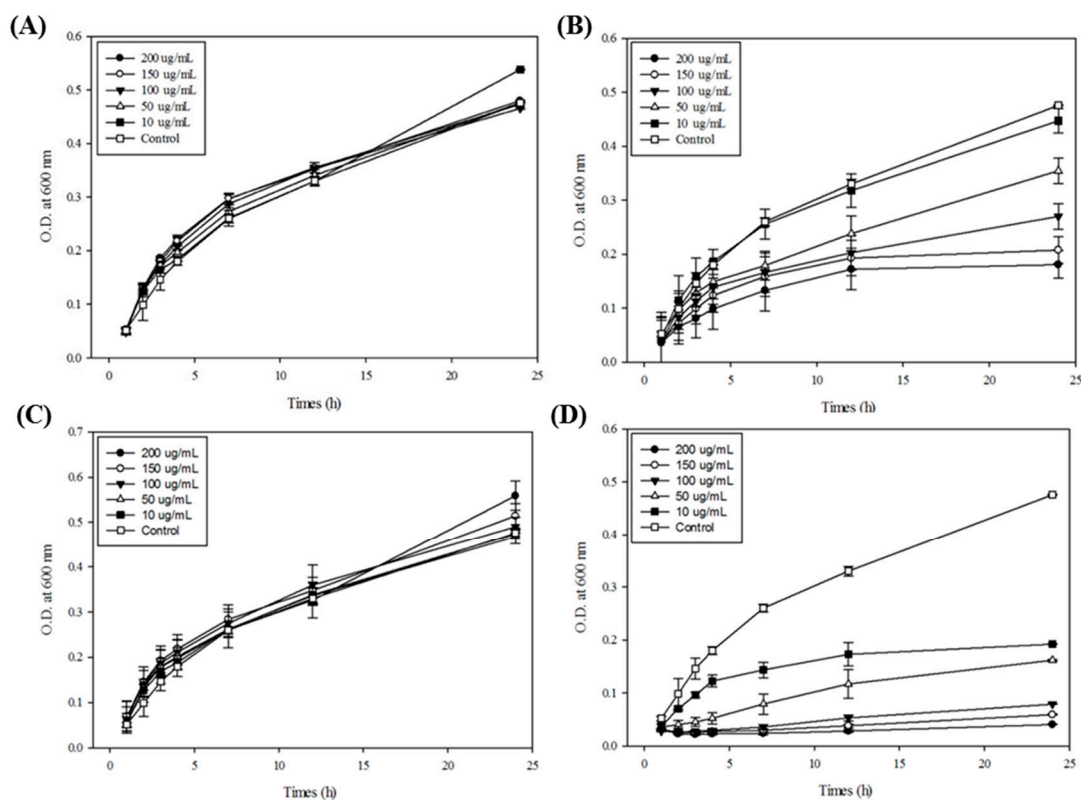


Figure S3. The bacterial growth studies of non-resistance *E. coli* strain. The growth curves from bacteria treated with (a) Cu-MSN, (b) Cu-MSN-TET, (c) PEI-SNP@Cu-MSN, (d) PEI-SNP@Cu-MSN-TET.

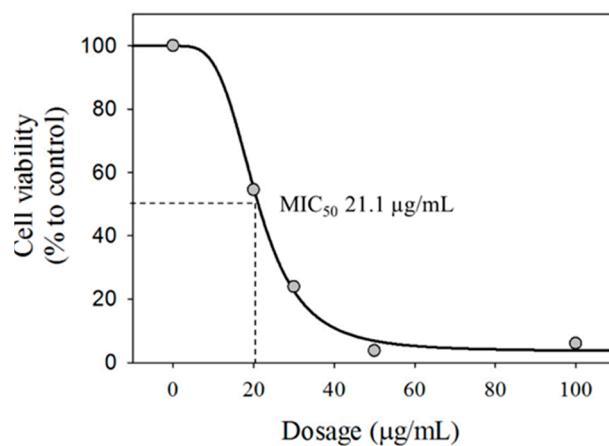


Figure S4. MIC calculation of PEI-SNP@Cu-MSN-TET sample in MDR *E. coli* strain. Bacteria was treated with a serial dosage of nanoparticles and incubated for 24 h.

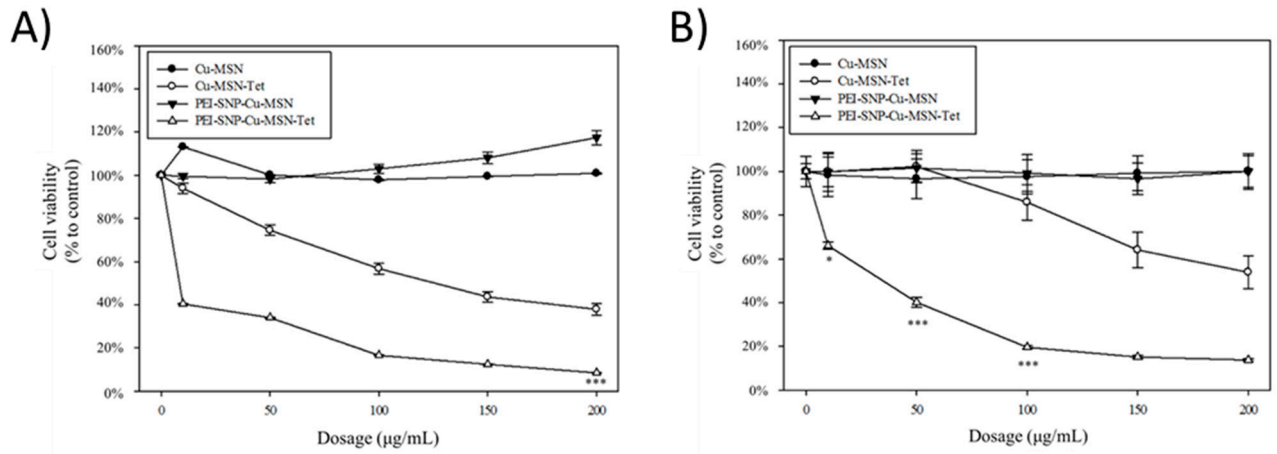


Figure S5. The antibacterial activity of nanoparticles on (A) non-resistance *E. coli* strain and (B) MDR *E. coli* strain. Bacteria was treated with a serial dosage of nanoparticles and incubated for 24 h. *p value < 0.05, and *** p value < 0.001 with control.