## Supplementary materials for

## *In-situ* Fluorescence of Lac dye stabilized gold nanoparticles; DNA binding assay and toxicity study

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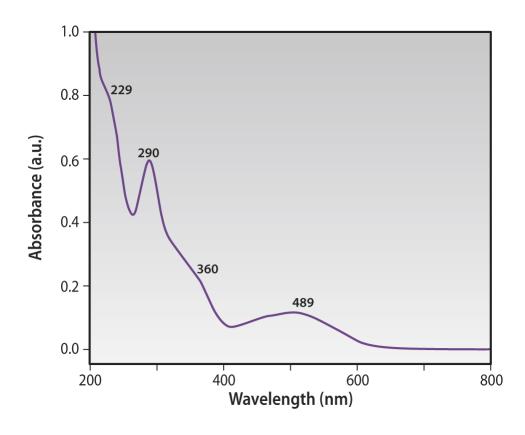


Fig. S1 UV-Vis spectrum of Lac extract showing different absorption maxima.

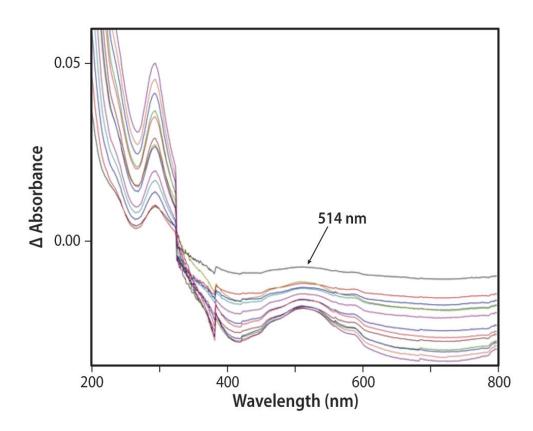


Fig. S2 Differential absorption spectroscopic study of DNA-Lac interaction. New peak at 514 nm proves the formation of the complex.

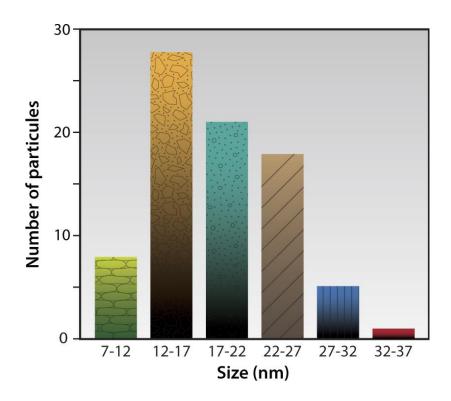


Fig. S3 TEM histogram to determine average diameter of AuNPs.

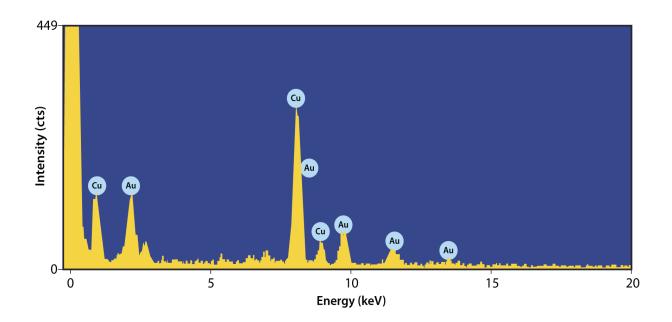


Fig. S4 Energy dispersive X-ray spectrum of AuNPs.

**Table. S1.** Tabular expression of the antimicrobial activity of Lac stabilized AuNPs on both

 Gram positive and Gram negative bacteria.

ORGANISMS USED	Gram negative	Gram positive
COMPOUND	Escherichia coli	Bacillus subtilis
Sterile water	0	0
Gold nanoparticles supernatant	0	0
Gold nanoparticles	0	0