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.

<table>
<thead>
<tr>
<th>ORGANISMS USED</th>
<th>Gram negative</th>
<th>Gram positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPOUND</td>
<td><em>Escherichia coli</em></td>
<td><em>Bacillus subtilis</em></td>
</tr>
<tr>
<td>Sterile water</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Gold nanoparticles supernatant</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Gold nanoparticles</td>
<td>0</td>
<td>0</td>
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