## Supplementary Material

## Facile one-step synthesis of gold nanoparticles using Viscum album and evaluation of their antibacterial potential

Muhammad Ishaq ${ }^{\text {A }}$, Muhammad Numan ${ }^{\text {A }}$, Umar Zeb ${ }^{\mathrm{B}, \mathrm{C}^{*}}$, Fengjie Cui ${ }^{\mathrm{C}}$, Salma Shad $^{\mathrm{D}}$, Syed Adil Hayat ${ }^{\mathrm{A}}$, Azizullah Azizullah ${ }^{\mathrm{B}}$, Imad Uddin ${ }^{\mathrm{D}}$, Muzaffar IqbaI ${ }^{\mathrm{D}}$, Fazli Rahim ${ }^{\mathrm{A}}$, Naeem Khan ${ }^{\mathrm{E}}$, Kotb A. Attia ${ }^{\mathrm{F}}$, and Sajid Fiaz ${ }^{\mathrm{G}, *}$
${ }^{\text {A }}$ Department of Botany, Bacha Khan University, Charsadda, KPK 24631, Pakistan.
${ }^{B}$ Faculty of Biological \& Biomedical Sciences, Department of Biology, The University of Haripur, Haripur, KPK 22620, Pakistan.
${ }^{\text {CS School of Food and Biological Engineering, Jiangsu University, Zhenjiang 212013, PR China. }}$
${ }^{\text {D }}$ Faculty of Natural Sciences, Department of Chemistry, The University of Haripur, Haripur, KPK 22620, Pakistan.
${ }^{\text {E D D }}$, 32611, USA.
${ }^{F}$ Department of Biochemistry, College of Science, King Saud University, P.O. Box 2455, Riyadh 11451, Riyadh, Saudi Arabia.
${ }^{G}$ Department of Plant Breeding and Genetics, The University of Haripur, Haripur 22620, Pakistan.
*Correspondence to: Umar Zeb Faculty of Biological \& Biomedical Sciences, Department of Biology, The University of Haripur, Haripur, KPK 22620, Pakistan Email: umar.zeb@uoh.edu.pk Sajid Fiaz Department of Plant Breeding and Genetics, The University of Haripur, Haripur 22620, Pakistan Email: sfiaz@uoh.edu.pk

## Supplementary Material



Fig. S1. Viscum album morphology image of Viscum album growing on Ole ferruginea royal

| Bacterial Species |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | E.coli | S. typhi | Entero- Bactor | B. stubtilis |
|  | Concentration <br> $\mu \mathrm{I} / \mathrm{l}$ | $\%$ Inhibition | $\%$ Inhibition | $\%$ Inhibition | $\%$ Inhibition |
|  | 50 | 30 | 56.67 | 30 | 31.67 |
|  | 100 | 63.33 | 76.67 | 36.67 | 43.33 |
|  | 25 | 26.67 | 36.67 | 26.67 | 28.33 |
|  | 50 | 40 | 43.33 | 36.67 | 36.67 |
|  | 75 | 46.67 | 53.33 | 43.33 | 46.67 |
|  | 100 | 56.67 | 66.67 | 51.67 | 56.67 |

Table S1. Inhibition zone of gold NPs and plant extract against Human Pathogen

