

## Supplementary Figures

### Fabrication of innocuous gold nanoparticles using plant cells in culture

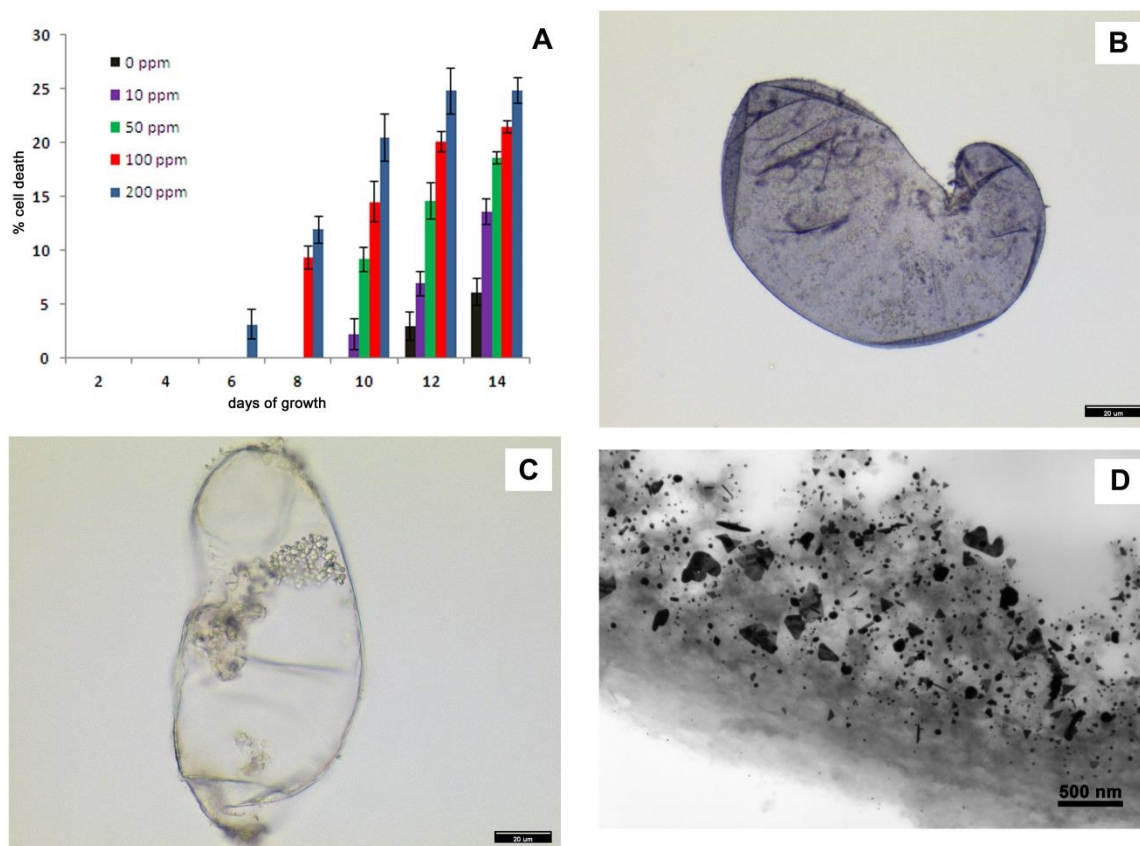
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**Figure 1.** Interaction of KAuCl<sub>4</sub> with the cells of *M. sativa*. Percentage of death in the cells of *M. sativa* treated with four different concentrations (10, 50, 100 and 200 ppm) of KAuCl<sub>4</sub> plotted against that of the untreated (0 ppm) control group. (A). Color change in cells treated with KAuCl<sub>4</sub> (B) and the untreated control (C) showing its absence (observable in all the concentrations of KAuCl<sub>4</sub> tested; however the color intensities increased from 10 ppm to 200 ppm which is assumed to be due to the increase in number and size of the particles distributed in the respective samples). Ultra-thin section of cell treated with KAuCl<sub>4</sub> showing AuNP accumulation inside the cytoplasm (D). Values of cell count are means of three biological replicates and two technical replicates each and plotted with  $\pm$ SE. Significance analysis by t-test showed a value higher than 0.05.

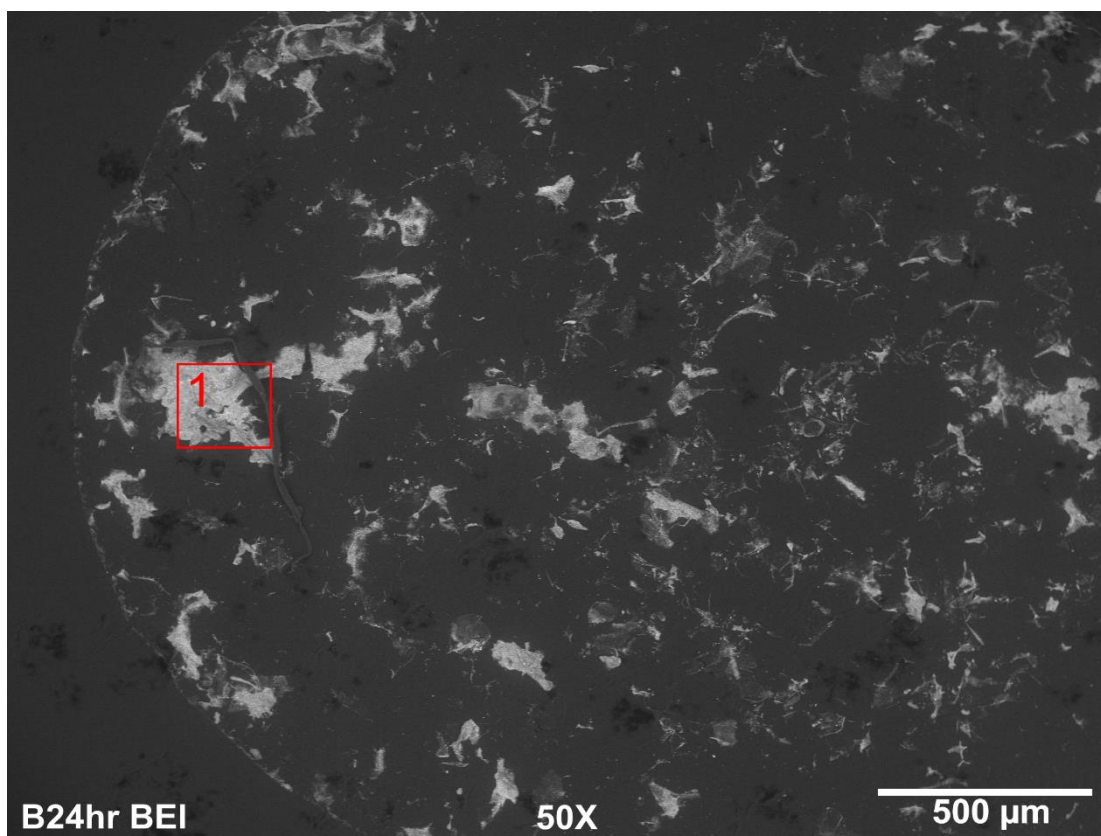


Figure 2A. Image from SEM showing AuNPs distributed in the cell lysate. Numbered box indicates the area scanned for detecting the relative concentration of different elements.

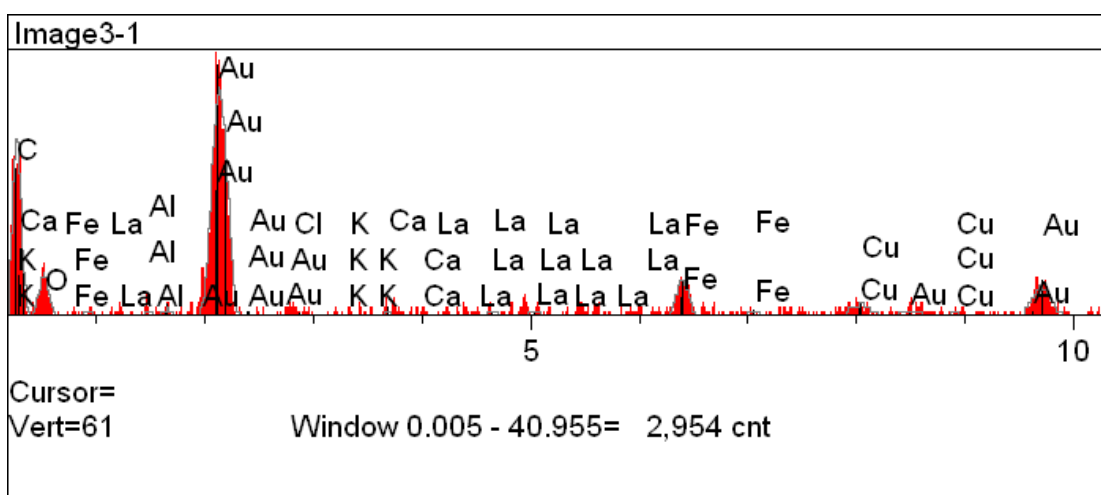


Figure 2B. EDX spectrum showing the highest peak of gold confirming the nature of AuNPs synthesized by the suspension cells of *M. sativa*. Carbon peak development is due to the carbon tape used for loading the sample.

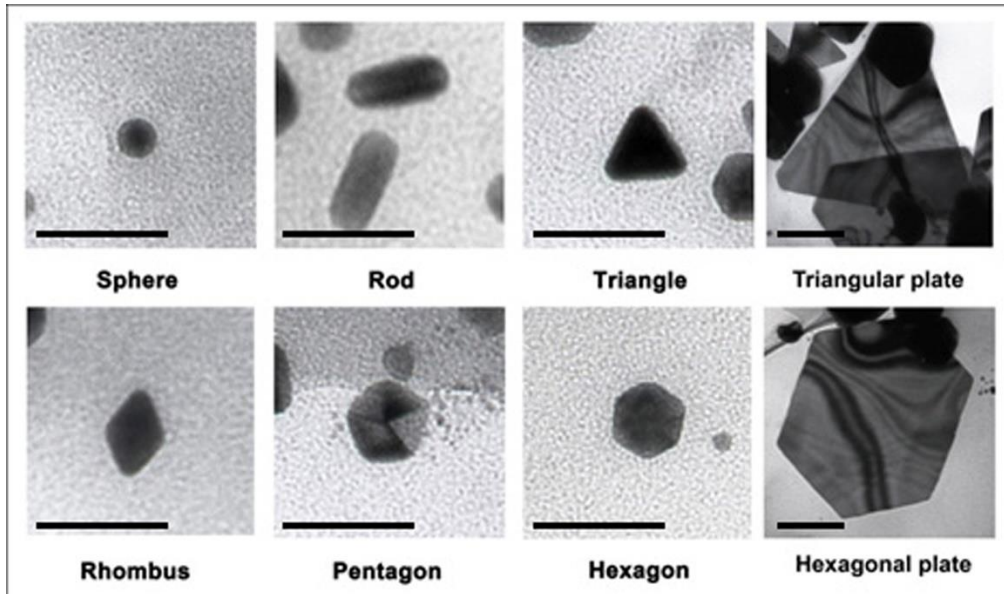


Figure 3. AuNPs of different geometries synthesized in the suspension cells of *M. sativa*. Scale bars are of 100 nm.

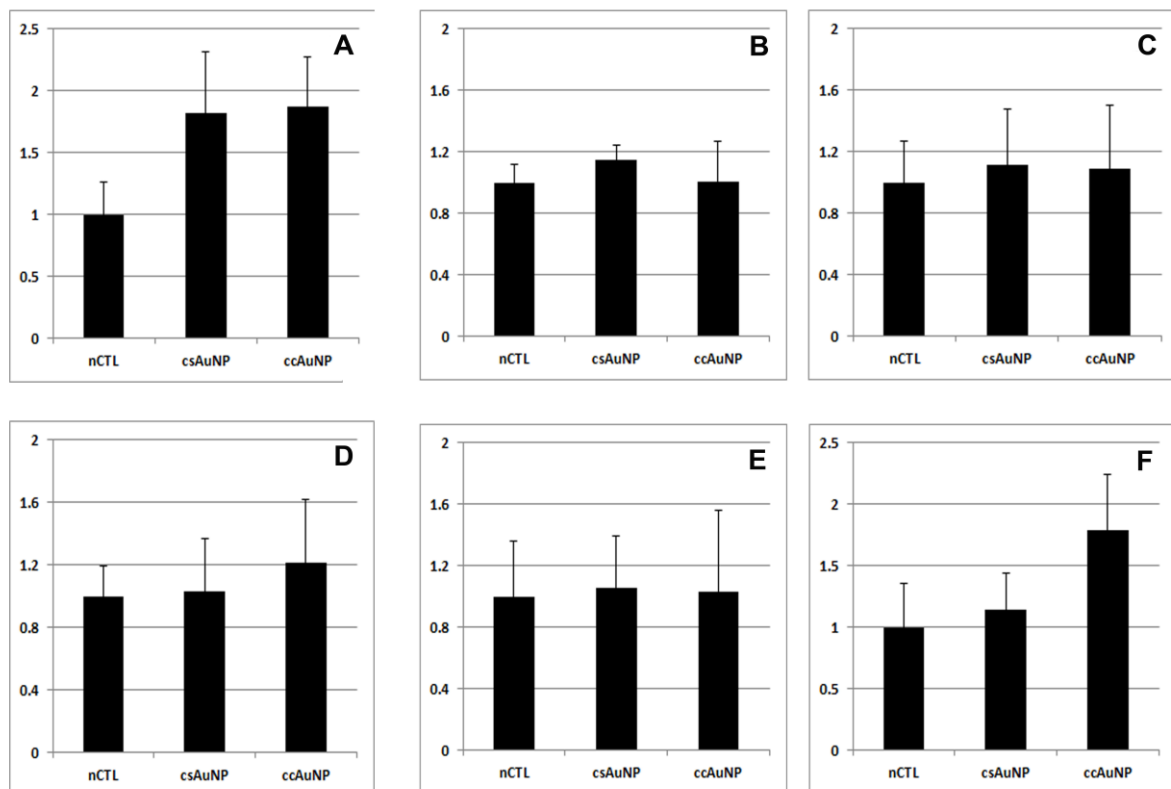


Figure 4. Expression levels of genes (analyzed by qPCR) associated with immune response in mice subjected to ccAuNPs show comparable effects to those of csAuNPs. Relative expression levels of *MCPI* (A), *TGFβ* (B), *TNFα* (C), *IFNγ* (D), *IL1α* (E) and *IL10* (F) of the AuNP treated groups are plotted against those of the normal control (nCTL). No significant differences (t-test;  $p > 0.05$ ) between the two treatment groups were recorded.