

Supplementary Materials: Phytotoxic Evaluation of Bio-influential Silver Nanoparticles on Lettuce

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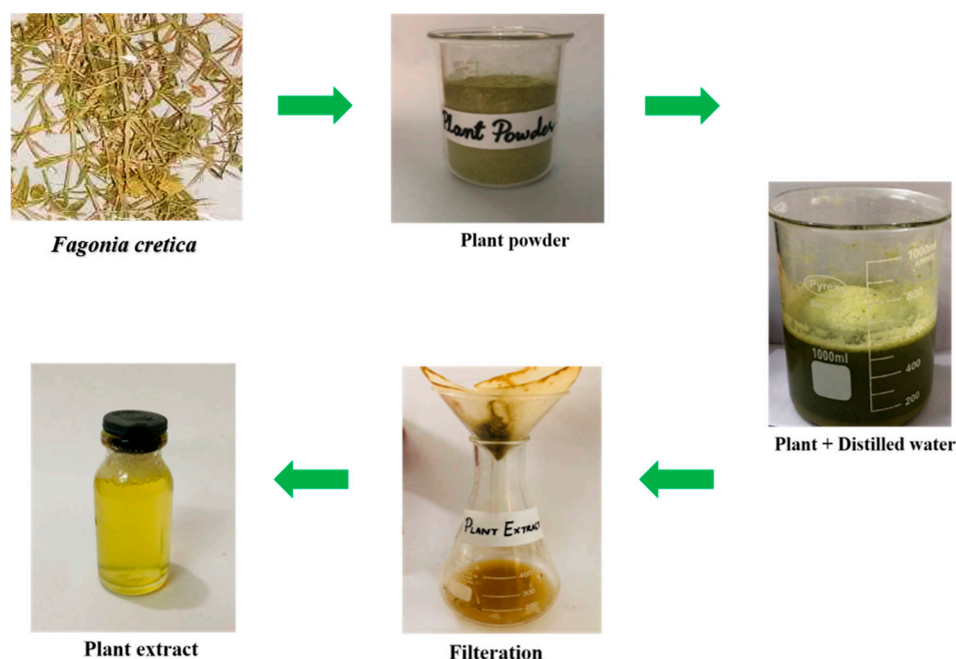


Figure S1. Schematic presentation of extraction of reducing agent from the *Fagonia cretica* plant for the synthesis of Ag NPs. The whole plant of *Fagonia cretica* was taken from Agriculture Department of The Islamia University of Bahawalpur, Pakistan. Plant of *Fagonia cretica* was first washed under running tap water and then finally washed with distilled water. After that, plant was dried until all the moisture was lost and then grounded by mortar and pestle up to the formation of coarse powder. Afterward, 5 g of plant powder was added into 100 mL of distilled water. This was boiled on hot plate stirrer for 2 h. Then cooled and filtered. And then plant extract filtrate were kept at 4 °C for further use as shown.



Figure S2. Hand sowing of lettuce seeds in seedling tray containing coconut peat. Seeds were hand sown in seedling tray containing coconut peat medium. An adequate amount of water was sprinkled over the organic medium. Moreover, seedling tray was under laid with water containing plastic pots which ensured moisture and water availability to seeds in order to maximize seed germination. Seedling tray was placed outdoor where it was natural sunny area and temperature was between 18–26 °C.



Figure S3. Germination of Lettuce seeds in seedling tray in natural sunlight. Seeds started germination after a week. To ensure maximum germination, organic medium must not run dry and should be sprinkled with water every day according to the requirement.



Figure S4. Germinating seedlings of lettuce after 7–14 days of sowing. Seedlings were kept grown until they were 5 cm tall and have about three leaves.



Figure S5. (a) Seedlings of lettuce after transferred to pots and (b) net pots are placed in containers containing hydroponic nutrients and water. Carefully, without tugging, individual seedlings were taken from their cells to the net pots. Six uniform seedlings were transferred to net pots. Each net pot was carefully placed in separate plastic container which acts as a nutrient reservoir. Plastic containers were filled with 1000 mL of Hoagland's solution.



Figure S6. Labeling of lettuce seedlings 5 test groups *i.e.*, control group, 100, 50, 25 mg/L Ag NPs and AgNO₃. After transferring net pots to nutrient reservoirs, 5 tests groups were labeled. Each group in triplets and daily supplied to every test plantlet with 12 mL of Ag NPs solution of different concentrations. The Ag NPs solutions were employed continuously for 25 days along with the control and AgNO₃ of concentration 0.01 M. All the plants were kept in the open atmosphere and it was maintained on 14 h light/10 h dark cycle at ~22 °C.



Figure S7. (a) Lettuce plant after 25 days and ready to harvest. (b) Harvested leaves of lettuce, after 2 weeks. Lettuce leaves were carefully harvested for experimental purpose.

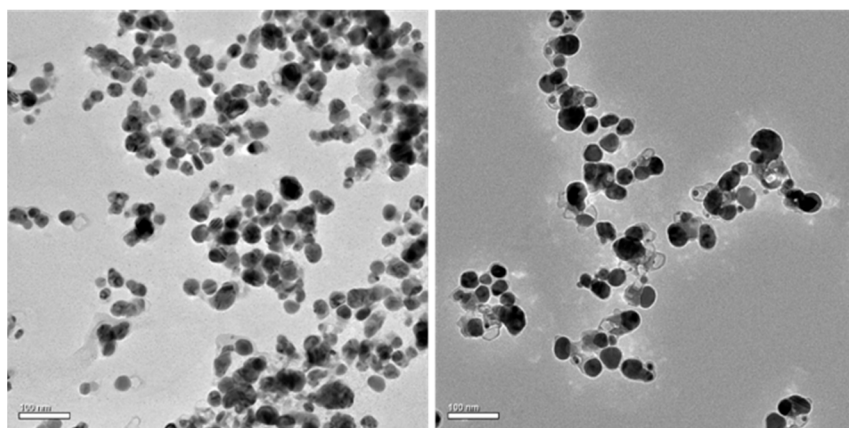
TEM after one Month

Figure S8. TEM images of Ag NPs taken after their stable suspension for one month.



Figure S9. Effect of different concentrations of Ag NPs and AgNO₃ (1 M) on shoot length of lettuce plant.