

THE EFFECT OF SILVER NANOPARTICLES ON THE ANTIOXIDANT CAPACITY AND TOTAL SOLUBLE PROTEIN PATTERN IN TOMATO SEEDLINGS UNDER IN VITRO CULTURE

Roya Razavizadeh

Payame Noor University, Iran

Today, synthetic nanoparticles encompass a wide range of particles with unique properties and have many applications in the field of nanotechnology. Due to the emergence and lack of understanding of the consequences of using nanoparticles, investigating the effect of releasing these particles in the environment at various biological levels is important. In this study, the effects of nanoparticles of silver in concentrations of 0, 2.5, 5, 10, 20, 40, 80 and 100 ppm on physiological parameters such as total anthocyanin, total soluble protein and enzyme activities of catalase, ascorbate peroxidase and superoxide dismutase in tomato seedlings (*Solanum Lycopersicon*) under in vitro were evaluated. The results showed that in different concentrations of silver nanoparticles, the amount of anthocyanin, total solution protein and relative expression of some protein bands in root and shoot changed in different ways. The response of the plant was also detected with changes in the activities of antioxidant enzymes of root and stem.

Biography

Roya Razavizadeh is an professor in the Department of Biology in Payame Noor University.

razavi.roya@gmail.com