World Academy of Science, Engineering and Technology
International Journal of Geological and Environmental Engineering
Vol:10, No:04, 2016

Nanoparticles on Biological Biomarquers Models: Paramecium Tetraurelia and Helix aspersa

Authors : H. Djebar, L. Khene, M. Boucenna, M. R. Djebar, M. N. Khebbeb, M. Djekoun

Abstract : Currently in toxicology, use of alternative models permits to understand the mechanisms of toxicity at different levels of cells. Objectives of our research concern the determination of NPs ZnO, TiO2, AlO2, and FeO2 effect on ciliate protist freshwater Paramecium sp and Helix aspersa. The result obtained show that NPs increased antioxidative enzyme activity like catalase, glutathione –S-transferase and level GSH. Also, cells treated with high concentrations of NPs showed a high level of MDA. In conclusion, observations from growth and enzymatic parameters suggest on one hand that treatment with NPs provokes an oxidative stress and on the other that snale and paramecium are excellent alternatives models for ecotoxicological studies.

Keywords : NPs, GST, catalase, GSH, MDA, toxicity, snale and paramecium
Conference Title : ICGE 2016 : International Conference on Geological Engineering
Conference Location : Istanbul, Türkiye
Conference Dates : April 19-20, 2016

Open Science Index, Geological and Environmental Engineering Vol:10, No:04, 2016 publications.waset.org/abstracts/49322.pdf