



In vitro* Free Radical Scavenging Activity of Zinc Oxide Nanoparticles Synthesized from the Brown Seaweed - *TurbinariaConoides

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Abstract:Free radicals are the atomic and molecular varieties of oxygen that are collectively known as reactive oxygen species that initiates oxidative stress which is an imbalance between the formation and neutralization of the pro-oxidants. The free radicals seek stability by stealing electrons from the biological macromolecules such as proteins, lipids and DNA in healthy human cells that in turn leads to the damage of proteins and DNA along with lipid peroxidation. The production of nanoparticles under nontoxic, green conditions is of vital importance to address the growing concerns on the overall toxicity of metallic nanoparticles for medical and technological applications. The free radical scavenging activity of the zinc oxide nanoparticle synthesized from the crude extract of *Turbinariaconoides* was assessed against *in vitro* radicals like by DPPH, Superoxide, Nitric oxide, Hydroxyl and Hydrogen peroxide. The radical scavenging activity of zinc oxide nanoparticle synthesized from the crude extract of *Turbinariaconoides* shows potent scavenging activity and this may be mainly due to redox properties in absorbing and neutralizing free radicals, quenching singlet and triplet oxygen or decomposing peroxides.

Keywords: Free radicals, scavenging, zinc oxide nanoparticles, *Turbinariaconoides*.

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