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Formulation and pharmacological evaluation of metallic nanoparticles

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In recent research and development there has been prodigious excitement in the nano pharmacological area for the study of nanoparticles synthesis using some natural products. Biological methods have been used to synthesize zinc oxide nanoparticles in presence of medicinally active plants such as *Ocimum tenuiflorum, Azadirachta indica*, etc., and this intention made us to assess the biologically synthesized zinc oxide nanoparticles from the leaf of *Ocimum tenuiflorum* using 1 mM zinc oxide solution. Zinc oxide nanoparticles have been widely used for many applications. In current study the nanoparticles tested for their anti-diabetic activity. Morphology and metal composition of synthesized nanoparticles were determined by characterization techniques. Poly herbal formulation was prepared by proper addition of plant mediated zinc oxide nanoparticles that were prepared from *Ocimum tenuiflorum* and *Azadirachta indica*. The formulation tested for its in vitro anti diabetic activity using α-amylase assay. The strongest activity (at concentration: 25 mg/ml) was shown by the nanoparticles formulation (97.77%) comparatively with crude extract. The outcomes of this study show that the administration of some of metallic nanoparticles may possibly control the postprandial blood glucose ranges and confirm the use of these herbs suggested as a treatment of diabetes in traditional medicine and displayed a good inhibitory activity on amylase.

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