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Toxicity of iron oxide nanoparticles, on antioxidant enzymes and free radicals in male rats

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The present study Wistar male rats were used. Rats were divided into 2 equal groups, 10 rats each. Group 1 served as control, group 2 was administered orally with Fe₂O₃NPs. Animals were treated with the doses every day for 90 days. Results showed significant ($P < 0.05$) decrease in the antioxidant enzymes (GPX, GST, CAT and SOD) and reduced Glutathione (GSH) and Total Antioxidant Capacity (TAC), while significant ($P < 0.05$) increase in Thiobarbituric Acid-Reactive Substances (TBARS) and Nitric Oxide (NO) in plasma and testes of rats treated with Fe₂O₃NPs, compared to control group.

Keywords: Iron oxide nanoparticles, Antioxidant enzymes, Free radicals.

Biography

Abdelsalam Abuzreda has done PhD in Nanotoxicity on Molecular and Physiological Characteristics, Assistant Professor & Postdoctoral Research fellow, Department of Health Safety and Environmental (HSE), Arabian Gulf Oil Company (AGOCO), Benghazi, Libya.

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