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Nanotechnology to Nanotoxicity, Showing its Injuries Concerns on Human Health

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Abstract: *Nanotechnology is widely used in medical applications and personal care products for the potential benefits of diagnosis and treatment. Nanomaterials and nanodevices s are being produced intentionally, unintentionally and manufactured or engineered by different methods and release into the environment without any safety test. Nanotoxicity has become a subject of concern in nanoscience and nanotechnology Because of increasing toxic effect of nanomaterials on living organisms The technical advances in nanotechnology must be balanced with the potential human health and environmental adverse effect. The Mechanism Underlying The Toxicity Of Nanomaterials Have Recently Been Studied Intensively. An Important Mechanism of nanotoxicity is Generation Of Reactive Oxygen species (ROS). Over production of ROS can induce oxidative stress resulting in cell failing to maintain normal physiological redox regulated functions. This in turn leads to DNA damage unregulated cell signaling, changes in cell motility, cytotoxicity, apoptosis and cancer initiation.*

Keywords: Nanoparticles, Nanotoxicity, ROS, Fullerenes, DNA damage, oxidative stress

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