Molecular study on the potential therapeutic activity of novel nanocomposite on cancerous tumor bearing mice

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Nanoparticles are making significant contributions in the development of new approaches of drug delivery in cancer and can provide a platform for combined therapeutics with subsequent monitoring of response. Basic curcumin and zinc oxide (ZnO) nanocomposites modified with vitamin C and CTAB have been exerting chemo-preventative activity against cancer in mice animal model. The present results observed that nanocomposite have distinct effects on liver cell viability via killing cancer cells, while posing no effect on normal cells (hepatocytes). The marked difference in cytotoxicity between cancer cells and normal cells suggests an exciting potential for nanocomposite as novel alternatives to cancer therapy. Our molecular data showed that both mRNA and protein levels of tumor suppressor gene p53 were upregulated and induce activity of DNA fragmentation in liver cells.

Biography
Mohammed F El-Shiekha has completed his PhD from the Department of Biochemistry, Faculty of Veterinary Medicine, Benha University, Egypt. He is a Faculty Member in the Department of Biochemistry and pharmacy in October 6 University, Egypt. He has published 6 papers in reputed journals.

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