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Colloidal or silver nanoparticles reduce the growth of B16F10 melanoma tumors

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Abstract

Previosuly, we reported the cytotoxic effect of colloidal silver (AgC) on MCF-7 breast cancer cell line. However, there is scarce information on its antitumor potential. The aim of this study was to evaluate the anti-tumoral activity of colloidal silver (AgC) or silver nanoparticles (AgNPs) in a B16F10 melanoma mice model. *In vitro*, B16F10 cells were treated with different concentrations of AgC or AgNPs and cell viability was evaluated by MTT method, both treatments had cytotoxic effects against B16F10 cell line. *In vivo*, B16F10 melanoma cells (5×10^5) were implanted in six weeks old C57BL/6 mice. About 8 days after cells injection, the subcutaneous treatments were started with AgC or AgNPs, tumor volume and tumor weight were evaluated and the difference of treated groups and control demonstrated that melanoma tumor growth was significantly decreased. However AgNPs is better than AgC treatment in reducing the tumoral volume and weight. Our results suggest that AgC or AgNPs could be useful as an antiproliferative drug, inducing an impairment of tumoral growth.

Biography

Dr. Franco-Molina has more than ten years of experience in cancer and inflammation research is Professor and President of Immunology Academy of the faculty of Biology Science of the Universidad Autónoma de Nuevo León. We studied new compounds with anticancer activities and cell therapy against cancer. He has published more than 18 articles in international journals and 1 patent.