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In vitro* assessment of genotoxic and clastogenic/aneugenic potential of *Crataegus oxyacantha* L. (Rosaceae) fruits extract*Edson Luis Maistro, Ana Paula Oliveira Quadros and Juliano Gabriel Froder**
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Medinal plants are widely consumed as home remedies and raw materials for the pharmaceutical industry. *Crataegus oxyacantha* L. (Rosaceae family) is a shrub native to Europe, being introduced in several countries, including Brazil. Its fruit has been used over the course of time as a diuretic, for dyspnea, and renal calculi. There are also studies that show its sedative and anxiolytic effects. Considering that plants can synthetise toxic substances to protect themselves which can affect the organisms that feed of them, the present investigation was carried out to examine the genotoxic effects of a *C. oxyacantha* fruits extract on human lymphocytes and HepG2 (liver hepatocellular carcinoma), using comet and micronucleus assays. The cells were treated with five different concentrations (2,5, 5, 10, 50 and 100 µg/ml) of extract, selected through a preliminary trypan blue-staining and MTT assays. The positive control was methyl methane-sulfonate (MMS) to lymphocytes and Benzo(A)pyrene to HepG2 cells. The results showed that this fruits extract presented DNA and/or chromosome damage at concentrations of 5, 10, 50 and 100 µg/ml in both cell types. Despite the medicinal potential of the *C. oxyacantha* fruits extract, the results observed suggest caution on its use and indicate that are necessary *in vivo* studies to assess the safety of using this extract by humans.

Biography

Edson Luis Maistro has completed his PhD from Universidade Estadual Paulista (UNESP), São Paulo, Brazil and Post-doctoral studies from Universidade Estadual de Londrina (UEL), Brazil. He has published more than 70 papers in reputed journals and has been serving as an Editorial Board Member of several journals. He is a mentor of several students in their Master's and PhD theses.

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