

Potential Genotoxicity and Cytogenetic Activities of Two Herbal Extracts on Cultured Mouse Spleen Cells

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Roselle (*Hibiscus sabdariffa*) is a species of *Hibiscus* native, it may be known as carcade, which has a medical benefit as reducing blood pressure for hypertensive patients. *Ficus carica* is an Asian species of flowering plants in the mulberry family, known as the common fig. Fig color may vary between cultivars due to various concentrations of anthocyanins, with cyanidin-3-O-rutinoside having particularly high content. The objective of the present study was to evaluate the *in vitro* genotoxicity for both plant extracts.

Results: No significant difference in the induction of micronuclei was observed between cultures treated with the Hibiscus or Ficus and the negative control, demonstrating the absence of genotoxic activity at the tested concentration. The same results were obtained with the chromosomal aberration assay on the two extracts; therefore the two extracts have not any significant effect of chromosomal aberrations, induced with tested concentrations.

In conclusion, the present work showed that the used concentrations of the two tested extracts (Hibiscus and Ficus) were considered as a safe extracts in using with human, beside their medicinal activities.

Keywords: Hibiscus, Ficus, *in vitro* genotoxicity, spleen cultured cells, chromosomal aberration and Micronucleus assay.