

Evaluation of the mutagenic potential of *Spondias purpurea* L. the micronucleus test in mice

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The use of medicinal plants has been frequent through the application of important sources of biologically active natural products, which are able to promote healing for diseases and their prevention because of their therapeutic properties, also used in complementary therapy or to meet the needs of health primary care. In many cases though the extent of how beneficial the effect of the use of those plants might be is not clear. This study highlights the importance of mutagenic tests to determine the extent to which plants and their compounds have beneficial effects. The present study was aimed to evaluate the mutagenic potential of *Spondias purpurea* L., popularly known as red mombim fruit tree, which produces red mombim fruits. A phytochemical study showed that *Spondias purpurea* L. is rich in secondary metabolites and red mombim fruits present moderate values of phenolic compounds, ascorbic acid and anthocyanins. It also present flavonoids such as quercetin, showing larger quantities in the bark. Studies have shown therapeutic effects such as anti-inflammatory activity. The mutagenic potential of *Spondias purpurea* L. was evaluated through the micronucleus test in peripheral blood of mice *in vivo*. Swiss albino mice *Mus musculus* (about 25g) were used for the micronucleus test. The animals were divided into groups of six, 3 males and 3 females. Each group received different doses established by previous studies of the plant extract in the maximum volume of 0.1 ml per 10g body weight. Based on the maximum dose, the concentrations used were 2000 mg/ml, 1000 mg/ml and 500 mg/ml, *via gavage*. Cyclophosphamide (50 mg / kg bw) was used as positive control, and distilled water (0.3 ml) was used as negative control. Blood was collected via tail drive 30 hours after administration. The slides were stained with Giemsa for further analysis. The frequency of micronuclei in blood cells was obtained by counting 2000 polychromatic erythrocytes. The micronucleus test presented no mutagenicity under the conditions tested. All results were evaluated by Student's t-test. Under the conditions tested *Spondias purpurea* L. did not present any statistically significant differences in the negative control group, as well as comparisons between males and females. Financial Support: UEPB, CNPq.