

Modulatory effect of *Byrsonima verbascifolia* (Malpighiaceae) against damage induced by doxorubicin in somatic cells of *Drosophila melanogaster*

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ABSTRACT. *Byrsonima verbascifolia*, popularly known in Brazil as murici, is a medicinal plant widely used in the treatment of bacterial and viral infections, Chagas's disease, diarrhea, bronchitis, cough and fever, as well as for protection of the intestinal mucosa. Since chemotherapy and radiotherapy, broadly employed in the treatment of cancer, can have undesirable side effects, such as inducing DNA damage in normal cells, it would be useful to investigate compounds that inhibit or reduce these effects. A lyophilized water extract of murici, used at three different concentrations (25, 50, and 100 mg/mL), was tested to determine if it could reduce damage induced by the antineoplastic compound doxorubicin in somatic cells of *Drosophila melanogaster*, analyzed by SMART/wing. The frequency of mutant spots in descendants from standard and high bioactivation crosses was significantly reduced by treatment with murici extract. Further studies are needed using other experimental

models, to determine if murici has the potential to be employed by cancer patients receiving chemotherapy.

Key words: *Byrsonima verbascifolia*; *Drosophila melanogaster*; SMART/wing; Murici; Anti-genotoxicity