

Genotoxicity testing of *Ambelania occidentalis* (Apocynaceae) leaf extract *in vivo*

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ABSTRACT. *Ambelania occidentalis* is routinely used in folk medicine for treating gastrointestinal disorders, even though there have been no safety trials. We evaluated the genotoxic potential of hydro-alcoholic extracts of this plant in mice; induced DNA damage was assessed in peripheral blood leukocytes and micronucleus induction was assessed in polychromatic erythrocytes from bone marrow. The extract was administered by an oral route at single doses of 1000, 1500 and 2000 mg/kg body weight. N-nitroso-N-ethylurea was used as a positive control. The comet assay was performed on peripheral blood leukocytes at 4 and 24 h after treatment, and the micronucleus test was carried out on bone marrow cells collected at 24 and 48 h after treatment. The ratio of polychromatic/normochromatic erythrocytes was scored for cytotoxicity assessment. No increase in the number of micronucleated polychromatic erythrocytes from bone marrow or in leukocyte DNA damage was observed. The hydro-alcoholic extracts of *A. occidentalis* had no mutagenic or cytotoxic effects in the mouse cells.

Key words: *Ambelania occidentalis*; Comet assay; Micronucleus test; Single-cell gel electrophoresis; Mutagenicity assay