Evaluation of mutagenic activity of extracts of *Byrsonima* species and *Terminalia catappa* by *Salmonella typhimurium* assay (Ames test)

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**Introduction:** The Brazilian cerrado contain several native plants used in folk medicine for treating many diseases. The genus *Byrsonima* is one of them. There are several reports of its use: the treatment of fungal and bacterial infections, tuberculosis, chronic wounds, Chagas disease, as a diuretic, antiemetic, and so on. In the literature, there are evidences for the following activities: antioxidant, antiprotozoal, CNS depressant, antihyperglycemia and antihyperlipemic. The phytochemical profile shows tannins, flavonoids, triterpenes, aromatic esters, and others, which indicates the pharmacological potential of this genre. Another studied plant was *Terminalia catappa*. It is used in folk medicine as anti diarrhoeal, antipyretic, and has hepatoprotective activity, antiinflammatory and anti-HIV reverse transcriptase activity. These plants are widely used by the population, mainly rural population, however, there aren’t studies to ensure the safety of their use.

**Experimental part:** The mutagens activities of extracts *T. catappa* (Tc), *B. correifolia* (Bc) and *B. coccolobifolia* (Bcc), were evaluated by Ames test (MARON, D.M. Mutation Research, p.173, 1983), according to preincubation assay, using five concentrations of each sample (in mg/plate, Bc: 0.52-16.7; Bcc: 0.52-16.0; Tc: 1.56-22.24), in triplicate, with the strains TA98, TA97, TA100 and TA102.

**Results/Discussion:** The results shows no mutagenic activity for *B. correifolia* extract, while the samples of *B. coccolobifolia* e *T. catappa* extracts demonstrated mutagenic activity by inducing a significative increase of revertant mutations.

**Conclusion:** The results of *B. coccolobifolia* and *T. catappa*, as they are mutagenic, demonstrate the risk which the population is subjected due to indiscriminate use of non-standardized extracts. For *B. correifolia* is still required the metabolic activation test to ensure the safety and rational use.

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