Mutagenic activity of *Crotalaria pallida* assessed by *Salmonella typhimurium* (AMES TEST).

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**Introduction:** Fabaceae has about 19,327 species divided into 727 genus. The *Crotalaria* genus, popularly known as “xique-xique”, belongs to this family and some pharmacological activities are described to this genus as antimicrobial, anti-inflammatory and anti-hepatotoxic. Despite of the large use of natural products with therapeutic properties, the uncontrolled consumption may offer health risks as mutagenic activity. To evaluate this property in *Crotalaria pallida*, Ames test was used, which is considered as a screening test to identify mutagenic compounds.

**Experimental part:** The mutagenic activities of ethanol extracts of leaves and stems (Cp.1), flowers (Cp.2), seed (Cp.3), pericarp (Cp.4) and alkaloid fraction (Fr.1) were analyzed by Ames test using TA100, TA98, TA97a and TA102 strains of *Salmonella typhimurium*, in the absence (-S9) and the presence (+S9) of metabolic activation, in five different concentrations: Cp.1- 0.74 to 18.0 mg/plate; Cp.2 - 0.8 to 15.0 mg/plate; Cp.3 - 1.7 to 18.0 mg/plate; Cp.4 - 1.0 to 18.0 mg/plate and Fr.1 - 2.5 to 25.0 mg/plate.

**Results/discussion:** The results showed the mutagenic potential of the plant studied. The mechanism of frameshift was observed in extracts of leaves and stems. The extract of flower showed evidence of mutagenicity, been the mutation caused by the mechanism of base pair substitution. The extract of seeds showed positive mutagenicity for all strains tested. To the extract of pericarp was verified evidence of mutagenicity in the present of metabolic activation. The alkaloid fraction showed positive mutagenicity in the absence of metabolism.

**Conclusion:** Although many compounds derived from plants have considerable pharmacological activities, some undesirable properties such as mutagenicity, carcinogenicity and toxicity may restrict their use as therapeutic agent as could be verified to *Crotalaria pallida*.

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