

Evaluation of the acute toxicity of chloroformic extract of *diclinanona calicina benoist (Annonaceae)* in the reproductive system of rats

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Medicinal plants have been used with therapeutical purposes for thousands of years. The pharmacology of these products probably involves the interaction of the innumerable natural components of their extracts; such substances have always remained like an alternative to the conventional medical treatments. However, the scientific studies regarding the pharmacology and, especially, the toxicity of these plants are found in a small number due to the false idea that what comes from nature cannot cause any harm to our health, which still remains nowadays. This study was carried out to evaluate the acute toxicity of the chloroformic extract of *Diclinanona calicina* Benoist (*Annonaceae*) in adults male Wistar rats, a promising species with antimicrobial activity¹. The plant was collected in the Adolpho Ducke forest reserve in Manaus, state of Amazonas, Brazil. The leaves were dried in an oven under incandescent lamps and, afterwards, ground down to powder. The chloroformic extract was obtained by continuous liquid-solid extraction. A group of six animals received by gavage 1 mL (10 mg.kg⁻¹) of the extract soluble in dimethylsulfoxide (DMSO). A control group, with six animals either, received the same amount of solvent. After the application, the next parameters were observed: food intake, body weight, atypical locomotion, piloerection, abdominal contraction and deaths in the first hour and during the following 7 days. Any others significant alterations were also registered. After this period, the animals were anesthetized with ether and its testicles, epididymides and seminal vesicles were removed, individually weighed and the macroscopic appearances observed. The data were subjected to the “t” test of Student/Mann-Whitney ($p < 0.05$). There was not found any difference concerning the body weight gain and the organs weight between the control and treated group. The morphologic analysis also did not show any alteration. However, after the gavage, the animals presented prostration and hypoactivity, piloerection and ptosis, absents after a short period. Under the evaluated conditions, the chloroformic extract of *D. calicina* did not show toxicity in the reproductive system organs. Nevertheless, the alterations observed in the animals, although temporary, suggested a possible toxic effect, which should be better studied.

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References

1. BASÍLIO-CARNEIRO, AL., TEIXEIRA, MFS., OLIVEIRA, VMA. et al. Screening of Amazonian plants from the Adolpho Ducke forest reserve, Manaus, state of Amazonas, Brazil, for antimicrobial activity. *Mem Inst Oswaldo Cruz*, Rio de Janeiro, Fev 2008, vol. 103, no. 1, p. 31-38,