

Insecticidal performance of *Cnidoscolus aconitifolius* (Euphorbiaceae) in the control of crop and stock pest of cowpea: exploratory acute oral toxicity studies

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1 ABSTRACT

Cowpea (*Vigna unguiculata* F) is a favoured host for pest life cycle. Many recourses control methods have been promoted leaving questions on the integrated management of pests in stocks. The general objective of this survey is to evaluate the in vivo acute oral toxicity of the ethanolic extract of *C. aconitifolius* (EECa), a plant species with insecticidal potential for cowpea pest management. Acute toxicity tests were performed in vivo at the Laboratory of Physiology and Experimental Pharmacology (LPEP/FAST) according to OECD Guidelines 423 on the Wistar albino rats (*Rattus norvegicus*). The EECa was administered at a single dose of 5000 mg/kg to rats using a stomach tube. The control lot received distilled water. Several clinical signs following the administration of EECa leaf powder over 14 days were noted and no mortality was observed. Apart from white blood cells, with statistically significant difference in control ($p < 0.05$), the statistical difference for other haematological parameters was insignificant ($p > 0.05$). The biochemical parameters showed statistically insignificant difference for test and controls batches ($p > 0.05$), except creatinine and uricemia of the control batch, which showed a significant statistical difference after 14 days ($p < 0.05$). Also, there is no significant statistical difference in the weight variation of animals. The EECa leaf powder presents no harmful effect on human health and can be used as an alternative in cowpea pest control in Benin.