

An Evaluation of the Potency of *Osbeckia octandra* and *Melothria maderaspatana* as Antihepatotoxic Agents

K. A. P. W. Jayathilaka, M. I. Thabrew, C. Pathirana, D. G. H. de Silva, D. J. B. Perera

Department of Biochemistry, Faculty of Medicine, University of Ruhuna, P.O. Box 70, Galle, Sri Lanka

Abstract

Aqueous extracts of the aerial parts of *Melothria maderaspatana* and the leaves of *Osbeckia octandra* have been compared with (+)-3-cyanidanol with regard to their abilities to alleviate carbon tetrachloride (CCl₄)-induced liver dysfunction in albino rats by comparing the abilities of these drugs to protect the liver against CCl₄-mediated alterations in the liver histopathology and serum levels of aspartate aminotransferase (GOT), alkaline amino-transferase (GPT), and alkaline phosphatase. In both pre-treatment and post-treatment (administration of drugs before or after CCl₄ treatment) experiments, the most marked rate of recovery of the liver was exhibited by the group of rats treated with *Melothria maderaspatana* extract. Although the protection offered by (+)-3-cyanidanol and *Osbeckia octandra* appears to be comparable in post-treatment, *Osbeckia* was significantly more effective in pre-treatment. From the overall results obtained it appears that the aqueous extracts of *Melothria maderaspatana* and *Osbeckia octandra* are both as potent or in some instances (in pre-treatment experiments) more potent than (+)-3-cyanidanol. Of the two plants tested under the present experimental conditions used, *Melothria maderaspatana* appears to be marginally more effective than *Osbeckia octandra* in protecting the liver against CCl₄-induced alterations.