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Protective effect of *Autranella congolensis* and *Sapium ellypticum* stem bark extracts against hepatotoxicity induced by thioacetamide

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Abstract

Autranella congolensis (AC) and Sapium ellypticum (SE) are two medicinal plants used in traditional medicine for treatment of various ailments including liver injuries. This study aimed to investigate the hepatoprotective activities of AC and SE extracts on thioacetamide (TAA) model.Methanol extracts of both plants at two different doses (100 and 200 mg/kg) was given orally to ratsfor 4 weeks. Hepatotoxicity was induced by s.c. injection of TAA. Biochemical markers of hepatooxicity and histopathological examination of liver were performed.The elevated level of Serum Glutamate Oxaloacetate Transaminase (GOT), Glutamate Pyruvate Transaminase (GPT) alkaline phosphatase (ALP), total bilirubin (TB) and direct bilirubine (DB) observed in TAA toxic groups were restored toward the normal group values, when animals received extract treatment. Administration of TAA also reduced significantly the level of liver antioxidants markers superoxide dismutase (SOD), catalase (CAT), reduced glutathione (GSH), and increased the level of lipid peroxidation (LPO). These changes were moderated in group of animals treated with SE and AC extracts. The activity of liver microsome CYP2E1, an isoenzyme involved in the activation of TAA to its toxic metabolite, was significantly high when animals received TAA treatment and both extracts reduced the increase in enzyme activity. The anatomical and biochemical changes exhibited by SE and AC extracts on toxic animals were comparable to those obtained with standard silymarin. The potent hepatoprotective effect of SE and AC extracts observed in this study showed that these plants can be used for the investigation of anti-hepatotoxic drugs.

Keywords

Liver, thioacetamide, plant extract, *Autranella congolensis* and *Sapium ellypticum*

Biography

Dr. Jules Clement Nguedia Assob completed his PhD in Medical Biochemistry at the age of 31 years from the University of Yaounde I in Cameroon. He is the Coordinator of the Medicine Programme of the Faculty of Health Sciences at the University of Buea. He has published more than 50 papers in reputed journals and serving as Editorial Board member in many journals. He is a fellow of the International Foundation for Sciences since 2007. His fields of research are: Ethnopharmacology; clinical biochemistry, medical microbiology and Public.