Serum biochemical changes accompanying prolonged administration of ethanolic extract of whole fruit of *Lagenaria breviflora* (Benth) Roberty in Wistar rats

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Toxicological evaluation of the whole fruit of *Lagenaria breviflora* was carried out using the serum biochemical changes accompanying prolonged administration of the ethanolic extract of the fruit in Wistar rats. Twenty five rats were randomly but equally divided into five groups. Rats in groups B, C, D and E were administered with ethanolic extract at 1000, 2000, 4000 and 8000 mg/kg body weight, respectively, while rats in group A received 0.9% physiological saline as the control animals. The lower doses of the extract (1000 and 2000 mg/kg body weight) lowered the serum levels of total cholesterol (TC), triglycerides (TG) and low density lipoprotein-cholesterol (LDL-C), while high-density lipoprotein-cholesterol (HDL-C) was elevated. Higher doses of 4000 and 8000 mg/kg body weight of the extract increased the serum levels of TG and LDL-C and, lowers HDL-C level in the serum. There was dose dependent elevation of serum glucose level in rats administered with the extract. The serum value of glucose in rats administered with the extract of 8000 mg/kg body weight increased two and half-fold over the control value. The mean serum total protein value increased for all the treatment groups when compared with that of the rats in the control group. The serum creatinine (CRT) level increased dose dependently and blood urea nitrogen (BUN) was elevated two-fold in most of the test groups. This was corroborated with histopathological findings revealing marked renal tubular degeneration. The serum level of ALP increased significantly (*P* < 0.05) in test rats administered the highest dose of the extract. It was concluded that therapeutic application of the extract of *L. breviflora* is quite safe at lower doses but it is nephrotoxic and can precipitate hyperglycaemia and dyslipidaemia at higher doses.

**Key words:** Toxicological evaluation, *Lagenaria breviflora*, fruit, serum biochemistry, Wistar rat.