

EVALUATION OF ANTI-DIABETIC AND ANTI-LIPIDAEMIC POTENTIAL OF AQUEOUS LEAF EXTRACT OF *MORINGA OLEIFERA* ON STREPTOZOTOCIN DIABETIC-INDUCED ALBINO RATS

¹Omeodu, S. I., *¹Onyegeme-Okerenta, B. M., Nnake, N. B.

¹Department of Biochemistry, University of Port Harcourt, PMB 5323
Port Harcourt, NIGERIA

*Corresponding author E-mail: blessing.onyegeme-okereanta@uniport.edu.ng

ABSTRACT

The present study was designed to evaluate the anti-diabetic and anti-lipidaemic effect of aqueous leaf extract of *Moringa oleifera* compared with daonil (standard drug). Forty (40) albino rats weighing of 200-340g were used and arranged into 5 groups comprising eight (8) rats in each group. Pilot study was carried out to ascertain that streptozotocin at 60mg/kg caused diabetes in the experimental animals. The first group served as the normal control while the remaining groups were induced with diabetes using streptozotocin at 60mg/kg body weight. Group two received only (STZ) and served as the diabetic control and the remaining group were treated using daonil and aqueous *Moringa oleifera* extract. After 5 weeks of treatment, aspartate amino transferase [AST], alanine amino transferase [ALT], alkaline phosphatase [ALP], gamma glutamyl transferase [GGT], Cholesterol [CHOL], Triacylglycerol [TG], Low-density lipoproteins [LDL] and High-density lipoproteins [HDL] and Glucose level were assayed. It was observed that there was a significant ($p < 0.05$) reduction in the concentration of AST, ALT, ALP, CHOL, TG, LDL of the various doses of aqueous *Moringa oleifera* extract when compared with the streptozotocin group (diabetic group) but no significant difference when daonil treated group was compared with diabetic group. Results obtained shows that there was significant difference when compared with daonil treated group only in the concentration of blood glucose and total protein. The study concluded that aqueous extract of *M. oleifera* produced a significant anti-diabetic (hypoglycaemic) and anti-lipidaemic (hypolipidaemic) effect in diabetic rats, impaired liver and impaired pancreas organ/function than daonil (standard drug).

Keywords: *Moringa oleifera*, Daonil, anti-diabetic, anti-lipidaemic, streptozotocin.