

Hypoglycemic Activity of *n*-Hexane, Chloroform, Ethylacetate, Acetone and Aqueous fractions of *Anacardium occidentales* Leaf extract in Streptozotocin Induced Diabetic Rats.

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ABSTRACT

Herbal remedies for diabetic treatment have gained popularity globally due to numerous side effects of the orthodox drugs. This study was designed to evaluate the hypoglycemic potentials of the various fractions of *Anacardium occidentales* leaf extracts in streptozotocin induced diabetic rats. Partitioning of the crude methanol extract was carried out by solvent-solvent extraction method. Induction of diabetes was performed by a single intraperitoneal injection of streptozotocin dissolved in 0.1 mL fresh cold citrate buffer at pH 4.5 at a dose of 45mg/kg body weight. The dose of fractions administered were 200 and 400 mg/kg body weight. The result of the hypoglycemic effect showed that rats administered Glibenclamide had 65.10 % \pm 2.36 activity and animals administered 400mg/kg body weight of ethylacetate fraction had the highest percentage glucose reduction of 56.54 % \pm 2.57 followed by chloroform fraction (55.47 % \pm 3.46), acetone (28.02 % \pm 3.72) and aqueous fraction 2.08 % \pm 3.78. All *Anacardium occidentales* fractions with the exception of aqueous fraction caused significantly ($p < 0.05$) hypoglycemic effect in dose dependent manner. In animals treated with 200 mg/kg body weight, the hypoglycemic effect of the Chloroform fraction was significantly ($p < 0.05$) higher than the

other fractions. *Anarcardim occidentales* fractions has some hypoglycemic potentials and could be further processed towards the management of diabetes mellitus

Keyword: Streptozotocin, Intraperitoneal, Glibenclamide, Diabetes mellitus, *Anarcardim occidentales*