

Hypoglycaemic Activity of *Bunchosia armeniaca* (Cav.) DC. Fruits in Normoglycaemic Wistar Albino Rats

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The study was carried out to investigate the hypoglycaemic activity of pericarp of *Bunchosia armeniaca* (Cav.) DC. fruits in normoglycaemic Wistar albino rats and also to study the phytochemistry of the pericarp of the fruit. Aqueous extract of the pericarp of the fruits was concentrated using rotary evaporator and the extract was stored in an air tight container at 4 °C until further use. Standard methods were used in the phytochemical analysis. The hypoglycaemic effect of the aqueous fruit extract of *B. armeniaca* was tested on the fasting Wistar albino rats. The glucose tolerance was tested using three oral doses of the extract which were equivalent to one, two and three fruit's pericarp masses (0.5 mL, 1 mL and 1.5 mL) in normoglycaemic Wistar albino male rats. The extract contained alkaloids, glycosides, phenols, flavonoids, tannins, diterpenes, carbohydrates and proteins as revealed by the phytochemical screening. Plasma glucose concentrations of different groups were separately compared with Glibenclamide and distilled water using paired samples t-test. All three tested doses increased the plasma glucose concentrations of rats, in both fasting plasma glucose level and oral glucose tolerance test. Hence, it can be concluded that *B. armeniaca* ripen fruits does not exhibit any hypoglycaemic effect, since they significantly ($p > 0.05$) increased the plasma glucose concentrations in normoglycaemic rats in the study population. According to the general public, *B. armeniaca* fruit is believed to have a blood glucose lowering effect, but there is no such effect as shown in this *in-vivo* study. Further, it was apparent that the pericarp of *B. armeniaca* has served as a source of carbohydrate in normoglycaemic rats to raise the blood glucose levels.

Keywords: *Bunchosia armeniaca*, Hypoglycaemic effect, Plasma glucose concentration, Diabetes mellitus