



ABSTRACT

Diabetic cases are increasing due to population growth, old age, urbanization, and increasing prevalence of obesity and physical inactivity. This study investigated the hypoglycemic activity of homogenized fruit and ethanolic leaf extract in 75% and 100% concentration of *Melothria pendula* in alloxan-induced diabetic mice. Male albino mice were acclimatized for one week and were fed with balanced diet and water ad libitum. Diabetes in mice was induced through intraperitoneal injection using alloxan (10 mg/kg b.w.) and changes in the blood glucose level were measured by glucometer at: initial, after alloxan induction, 7th, and 14th day treatment, respectively. The two weeks administration of *M. pendula* fruit and leaf extract to diabetic mice showed significant hypoglycemic effect ($p < 0.0001$). However, there are no significant differences compared to T₀ among the treatments aside from T₁ vs T₃, hence, all are effective in reducing hyperglycemia. Further study is recommended to isolate the active constituents of the plant and explore its mechanism of action.

Key words: Melothria pendula, Cucurbitaceae, Hyperglycemic activity, Antidiabetic, Blood glucose level.