BLOOD GLUCOSE LOWERING ACTIVITY OF SWEET BASIL (*OCIMUM BASILICUM* LINN.) LEAVES EXTRACT ON ALLOXAN-INDUCED SPRAGUE-DAWLEY RATS

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ABSTRACT

This study aims to determine the blood glucose-lowering activity of sweet basil (Ocimum basilicum) leaves extract in alloxan-induced diabetic rats. The blood glucose lowering activity of Sweet Basil leaf extract was determined through in-vivo analysis of 15 young male Alloxan-induced diabetic Sprague Dawley rats. An oral Glucose Tolerance Test (OGTT) was used to interpret the result. The study was conducted at Esteleydes Animal Laboratory and Research Facility, which started in January 2023 and was completed by the second week of July 2023. The phytochemical screening of the extract revealed the presence of tannins, saponins, alkaloids, glycosides, flavonoids, steroids, and triterpenoids, which may be accountable for the blood glucose-lowering activity of sweet basil (Ocimum basilicum Linn.). It has been demonstrated that administering sweet basil leaf extract to diabetic rats induced with alloxan lowers blood glucose levels in all basil leaf extract groups. At a dose of 400 mg/kgBW, the efficacy of sweet basil leaf extract was demonstrated. Acarbose 50 mg vs. Sweet Basil leaf extract 400 mg has no significant difference, stating that the 400mg of Sweet Basil Leaf Extract has the same efficacy as Acarbose 50 mg. Sweet basil leaf extract was proven to have blood glucose-lowering activity in alloxan-induced diabetic Sprague-Dawley rats.

Keywords: Ocimum basilicum, Sprague- Dawley rats, Alloxan-induced, Acarbose