PHYTOCHEMICAL AND ANTIHYPERGLYCEMIC ACTION OF FRUIT EXTRACTION OF *Momordica charantia* IN ALLOXAN-DIABETIC RATS

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ABSTRACT

PHYTOCHEMICAL OF ANTIHYPERGLYCEMIC ACTION OF *Momordica charantia* OF FRUIT EXTRACTION IN ALLOXAN-DIABETIC RATS

This study was conducted to identify the chemical constituent of *Momodica charantia* extract and observed the effect of various dosage of extract in the alloxan-diabetic rats. The fruit *M. charantia* was extracted by soaking the sample with water solvent, filtered and evaporated by using distillation method to produce the concentrated valuable mass. The main function of *M. charantia* extract is used for antidiabetic as it has great potential in reducing high level of blood glucose. The rats were divided into seven groups that consists normal group, diabetic control and group that receive different dosage treatment of aqueous extraction of *M. charantia* which dosage at 250 mg/kg, 200 mg/kg, 150 mg/kg, 100 mg/kg and 50 mg/kg based on body weight of rats. The rats was injected by using alloxan monohydrate for induction of hyperglycemic blood glucose levels and after 5 days the blood was taken through tail vein to confirmed diabetic condition. The blood glucose levels were measured for each three days within 15 days of treatment by using Accu-Chek advantage II glucometer. The phytochemical screening test shows positive for presence of alkaloid, saponins and glycosides. The effect of different dosage of treatment extract demonstrated that 200 mg/ kg gave better significant mean of decrement of blood glucose levels which is 6.27 ± 0.26 compared to the treatment group and diabetic control group. Besides, the amount of drinking water in rats can increase the potential in reducing high level blood glucose and this showed by rats in group that given 250 mg/ kg required high mean of drinking water which 56.33 ± 3.42 to recover from the diabetic condition. The body weight diabetic also showed the significant different between the group at $p < 0.05$. Effects of weight, the amount of water intake and glucose levels in the blood indicate that the highest dose treatment *M. charantia* extract of 250 mg / kg require a lot of water intake compared with the other group of that result from a high level of glucose in the blood. Treatment with a dose of 200 mg / kg showed that the level of glucose in the blood of rats can be lowered to normal level in contrast to the other group in which the glucose level is still in diabetic condition.

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