

EFFECT OF BITTER MELON (*Momordica charantia*) EXTRACTS ON GLOMERULUS AND TUBULES HISTOPATHOLOGY FEATURES OF RATS WITH ALLOXAN INDUCED DIABETES

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ABSTRACT

This study was conducted to investigate the effect of bitter melon (*Momordica charantia*) ethanolic extract on histopathological changes of kidney. Twenty male rats weight about 180-200 g were divided into five group and administered with different treatments for 21 days. Positive control group C+ was induced with 150 mg/kg BW alloxan and administered with placebo 0.5% Na CMC, negative control group C- was administered with placebo 0.5% Na CMC, first treatment group T1, second treatment group T2, and third treatment group T3 were induced with alloxan and were respectively administered with 250, 500, and 750 mg/kg BW of bitter melon ethanolic extract. The histopathological changes of necrosis at glomerulus and tubules were examined and scored using Banff scoring system then analyzed using Kruskal Wallis and continued with Mann-Whitney test. The result showed that bitter melon ethanolic extract decrease the severity of damage and necrosis caused by free radical on glomerulus and tubules of rats with alloxan induced diabetes. The best dose of ethanolic extract of bitter melon in this research was 750 mg/kg BW.

Keywords: *Momordica charantia*, alloxan, diabetes, hyperglycemia, ROS, free radical, necrosis, kidney, glomerulus, tubules.