ABSTRACT

Antidiabetic Activity of Dry Extract of *Vernonia amygdalina* D. and *Garcinia mangostana* L. Combination in Alloxan Induced Diabetic Mice

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Diabetes Mellitus (DM) is a chronic metabolic disorder characterized by high blood sugar levels as a result of insufficiency of insulin function. The present studies was carried out to evaluate combination of dry extract from *Vernonia amygdalina* D. and *Garcinia mangostana* L. for antidiabetic activity in alloxan induced diabetic mice. Alloxan was administered as a 120 mg/kg BW in buffer citrate to induce diabetes.

Combinations dry extract of *Vernonia amygdalina* D and *Garcinia mangostana* L with ratio 1:1, 1:2 and 2:1 (9,4 mg/20g BW mice), were administered orally to groups I, II, III, respectively for seven days. The standardized drug glibenclamide (0,013mg/20g BW mice) and CMC-Na 0,5 % was also administered orally to mice as positive and negative control groups respectively.

After repeated daily oral administrations of the extract (9,4 mg/20g BW mice) for seven days, the extract significantly reduced blood glucose level in diabetic mice from days 3 compared to negative control group. The dry extract of *Vernonia amygdalina* D. and *Garcinia mangostana* L. with ratio 1:1 showed the biggest reduction in blood glucose level significant with percentage 56,0%. The combination with ratio 2:1 and 1:2 also reduced blood glucose level with percentage 38,3% and 31,8 %.

Keywords: *Vernonia amygdalina* D., *Garcinia mangostana* L., antidiabetic activity., alloxan