ABSTRACT

Anticholesterol Activity from Combination Dry Extract of Vernonia amygdalina Delile leaves and Garcinia mangostana L. pericarpium in Alloxan Induced Cholesterol Mice

Jhoda Dwi Komala

Hypercholesterolemia has been associated with enhanced oxidative stress related to increase lipid peroxidation. Increased generation of oxidized LDL is a major factor in the vascular damage associated with high cholesterol levels. The present studies was done to evaluate combination of dried extract of Vernonia amygdalina Delile leaves and Garcinia mangostana L. pericarpium for antihypercholesterolemia activity in alloxan induced hypercholesterol mice. Alloxan was administered at 150mg/kg BW in buffer citrate to induce hypercholesterol.

Combination of dry extract Vernonia amygdalina Delile leaves and Garcinia mangostana L. pericarpium with ratio 1:1 ; 1:2 and 2:1 (9.4mg/20g BW mice), was administered orally for seven days on groups III, IV, V respectively. Standard drug Atorvastatin (0.052mg/20g BW mice) and CMC-Na 0.5% were administered orally to mice as positive and negative control.

After the treatment, group III and group V showed that the extract significantly reduce blood cholesterol level in hypercholesterol mice. Combination of dry extract from Vernonia amygdalina Delile leaves and Garcinia mangostana L. pericarpium with ratio 1:1 showed the highest reduction in blood cholesterol 102 ± 31.785 mg/dL. The combination with ratio 1:2 has no significant reduction with negative control group whereas in ratio 2:1 has significant reduction in blood cholesterol level with negative control group. The combination with ratio 2:1 showed reduction blood cholesterol level 70.32 ± 9.815 mg/dL. In the other hand, atorvastatin showed 98 ± 2.69 mg/dL of reduction blood cholesterol level. This results

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indicated that dry extract from *Vernonia amygdalina* Delile leaves and *Garcinia mangostana* L. pericarpium have equal capability with standard drug atorvastatin to reduce blood cholesterol level in hypercholestrol mice.

Keywords: *Vernonia amygdalina* Delile, *Garcinia mangostana* L., antihypercholestrolemia activity, dry extract