

SUMARY

The Activity Of *Morinda Citrifolia* Linn Extract Administration On The Superoxide Dismutase And Malonaldehyde Enzym In Male White Rats With Alloxan Induced

Recently, the word of medicine attention to antioxidant increasly, because negatif impact free radicals and oxidant can cause breaks of the membran cell, cell mutation. It is lead to tissue degeneration that is thought as result of multiple disease from oxidative stress. In diabetes mellitus, oxidative stress has been found tobe mainly due to an increased production of oxygen free radicals and a sharp reduction of antioxidant defenses.

Cost of chemical drugs more increasing and have been supported by back to nature and consume less chemical promotion, have been supported people to choice plant drugs for resolve their health problem.

Morinda citrifolia linn is a plant drugs consist of antioxidant. Administering it is hope free radicals activities is decrease so can not the pancreatic damage with diabetic complications.

The method of this study is laboratories experimental with extended randomized posttest only control design group of *morinda citrifolia* linn in alloxan-induced diabetic rat or oxidative stress.

The analyzed of *morinda citrifoli* has been used analysis of varians superoxide dismutase increased and malonaldehyde decreased to determined for antioxidant effect of *morinda citrifolia* linn. Examine of *morinda citrifolia* linn fruit extract include dose and time administering. The doses determined of 1500 mg/kgBB and 2000 mg/KgBB, that is used to investigated which dose have been antioxidant more effective, to diminished free radicals of lever fractions. Therefore, time of the treatment is different for one week and two weeks.

The based on analized of superoxide dismutase enzym changes and malonaldehyde been shown that administering of *morinda citrifolia* linn extract have been effect antioxidant more maximally at 2000 mg/KgBB dose for one week rather than at 2000 mg/KgBB doses for two weeks and at 1500 mg/KGBB dose for one week.

ABSTRACT

The Activity Of *Morinda Citrifolia* Linn Extract Administration On The Superoxide Dismutase And Malonaldehyde Enzym In Male White Rats With Alloxan Induced

Type I diabetes is thought to occur as a result of loss insulin-producing pancreatic β cells by environmentally triggered increased free radicals. In rodent model of diabetic, alloxan, a genotoxic methylating agent that targeted to β cells and hepar tissue, is used to trigger the initial death.

The objective of study was to find out the influence of *morinda citrifolia* linn extract on the antioxidant effect against alloxan induced free radicals in rats. The rats were divided randomly into six group. Alloxan was dissolved in aquabidest and injected intraperitoneally, either as a single dose of 115 mg/kg. One week after alloxan treatment, the *Morinda citrifolia* linn extract was administered by nasogastric tubing at a dose of 1500 mg/kg of body weight and 2000 mg/kg of body weight for one weeks, and at a dose of 2000 mg/kg of body weight for two weeks. Positif control groups were similarly injected with vehicle only and negatif control group one (was not injected alloxan and neither administered *morinda citrifolia* linn).

The results obtained with groups from each study were first analyzed using analysis of variance. Groups that showed different were further analyzed bay LSD test. The result of first study showed the *morinda citrifolia* extract of 2000 mg/Kg BW for one week or two weeks was successfully increased superoxide dismutase enzyme, but not at 1500 mg/KgBW dose.

The result of second study showed the *morinda citrifolia* extract of 2000 mg/Kg BW or 1500 mg/KgBW doses for one week was successfully decreased malonaldehyde enzyme, but not at 2000 mg/KgBW dose for two weeks.

The result of third study showed a significant different between the control and treatment groups with *morinda citrifolia* linn against alloxan induced in rats ($p=0.0000$).

From the result suggest that the *norinda citrifolia* linn extract has antioxidant effect which dose dependent manner.

Key words : *Moinda Citrifolia* linn, antioxidant, superoxide dismutase and malonal dehide.