ABSTRACT

Effect of Java Ginseng Extract {Talinum Paniculatum (Jacq.) Gaertn.} In Fitness of Male White Rat (Rattus norvegicus)

Background Perfect health is a state that is not only free of disease, but also has an optimal level of fitness; namely a condition a person can carry out daily activities without excessive fatigue, as well as having the ability to back up the emergency nature. Someone who does not fit easily tired and associated with excessive free radical formation. Java Ginseng is used to enhance physical endurance and mental bodies, increase energy, and stabilize the body physiology. Java Ginseng also strengthen the body to fight fatigue.

Objective This study proves the influence of Javanese ginseng extract against white male gym rat. Twenty-five mice grouped into control group and treatment group. Ginseng extract treatment group given a dose of 43.75 mg Java, 87.5 mg and 175 mg / kg, while the control group given 0.5% CMC Na, given sebanyal 1ml/100 gram BW.

Method Rats in each group were heavy intensity exercise performed before and after the given Java ginseng extract, by means allow to swim into the tub with water as high as 50 cm, and 9% body weight load tied 5 cm from the tip of the tail to a drowned rat. Fitness of rat seen by measuring the maximum swimming capacity and measure the degree of oxidative stress reduction. The degree of oxidative stress was measured using the indicator malondialdehyde (MDA). The ability of rats to swim a maximum length was measured by noting the length of time the rats to swim drowned, whereas blood samples for examination MDA conducted one hour after the rats swim.

Result The results of the maximum capacity long swim in the control group 23.60 ± 12.661 seconds. Java ginseng extract group dose 43.75 mg / BW 50.40 ± 44.055 seconds. Java ginseng extract group dose 87.5 mg / BW 100.60 ± 69.741 seconds. Java ginseng extract dose group 175 mg / BW 184.60 ± 97.362 seconds. ANOVA test results between groups obtained a significant difference ($p = 0.001$). Pearson correlation test results showed no association between length of dosing with increased swimming ($p = 0.010$). Results decreased levels of MDA in the control group 16.5061 ± 7.1893 µg/ml. Java ginseng extract group dose 43.75 mg / BW 31.6848 ± 15.6648 µg/ml. Java ginseng extract group dose 87.5 mg / BW 14.4659 ± 5.0108 µg/ml. Java ginseng extract dose group 175 mg / BW 15.4253 ± 8.7396 µg/ml. Anova test results between groups obtained a significant difference ($p = 0.046$),

Conclusion Java ginseng extract can increase the maximum ability to swim longer and reduce the degree of oxidative stress to see a decrease in the levels of MDA.

Keywords: Java ginseng extract, high intensity exercise swimming, oksidatif stress, malondialdehyde