

**THE EFFECT OF *Pachyrhizus erosus* CONCENTRATE COMBINED WITH
KEFIR GRAIN AS A SYNBIOTIC DRINK ON MALONDIALDEHYDE
BLOOD LEVEL OF HYPERLIPIDEMIC RATS**

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ABSTRACT

Background : Hyperlipidemia is the main risk factor leading to atherosclerosis and cardiovascular disease. Hyperlipidemia can be controlled by administering various kind of drugs but prolonged used of drugs can increase the harm side effect to the body. Therefore, the used of natural adjuvant therapy were developed to overcome the problem. The aim of this research is to know the effect of administering *Pachyrhizus erosus* concentrate combined with kefir grain as a synbiotic drink on the Malondialdehyde (MDA) blood level in dyslipidemic induced rats.

Method : This is an experimental research with pretest-posttest control group design. The positive control group (K+) and the treatment groups (P1,P2,P3) were given 5ml/200gr body weight of egg yolk once in a day for 4 weeks to induced dyslipidemia. After 4 weeks, the treatment groups were given 5ml/200gr body weight of synbiotic drink once a day also for 4 weeks. The MDA blood level of the rats were tested before and after the administration of synbiotic drink. The result then analyzed statistically .

Result : The results showed the mean of MDA decline of P1 group is $2,19 \pm 0,31$ nmol/ml, P2 group is $4,81 \pm 0,33$ nmol/ml, and P3 group is $5,72 \pm 0,16$ nmol/ml. The highest decline of MDA level showed in P3 group. The statistical analysis using paired t-test showed a significant difference of blood MDA level before and after 4 weeks administration of synbiotic drink ($p < 0,05$). One-way ANOVA analysis also showed a significant difference in blood MDA level among five groups after administration of synbiotic drink ($p < 0,05$).

Conclusion : Synbiotic drink combination of *Pachyrhizus erosus* concentrate and kefir grain has effect in lowering MDA blood level of dyslipidemic rats.

Keywords: *Pachyrhizus erosus*, Kefir, Hyperlipidemia, *Malondialdehyde*