ABSTRACT

PROTECTIVE EFFECTS OF GRANTING EXTRA VIRGIN OLIVE OIL (EVOO) AND HONEY ON BLOOD LOW DENSITY LIPOPROTEIN (LDL) LEVELS IN MALE WHITE RATS (*Rattus norvegicus*) *Sprague dawley* STRAIN THAT INDUCED BY HIGH-CHOLESTEROL DIET

By

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Hipercholesterolemia is a condition in which the blood cholesterol is increased beyond the normal threshold especially Low Density Lipoprotein (LDL). LDL is a lipoprotein that deliver cholesterol and trigliseride from liver to pheripheral tissues of human body, increased of LDL related to the increase of risk of Cardio Vascular Disease. Consumption of Extra Virgin Olive Oil (EVOO) and honey proved to be able to decrease LDL levels and prevent the oxidation of LDL in the blood because of their antioxidant component, there are MUFA and flavonoid.

The aim of this research is to know the influence of granting EVOO and honey to the level of blood LDL in male white rats (*Rattus norvegicus*) *Sprague dawley* strain that induced by high-cholesterol diet. This research is experimental research with post test only with control group design, using 25 male white rats that randomly selected and divided into 5 groups. Each group was adapted for 7 days before received the treatment. Group K(-) received a standard diet, K(+) received 3 ml of cow's brain suspension, P.EVOO received 3 ml of cow's brain suspension and 1 ml of EVOO, P.madu received 3 ml of cow's brain suspension and 1.35 ml of honey, P.kombinasi received 3 ml of cow's brain suspension and combination of 1.35 ml honey and 1 ml EVOO.

The research results obtained average LDL levels K(-) (24.25 ± 3.95); K(+) (50,93 ± 7,91); P.EVOO (24,14 ± 4,15); P.madu (21,61 ± 3,68); P.kombinasi (8,26 ± 4,55). The LDL levels of P.EVOO, P.madu, P.kombinasi are more fewer than K(+) and get significant difference levels using statistical tests *one way* ANOVA and *post hoc*.

Keywords : EVOO, high-cholesterol diet, honey, LDL.