

PENGARUH BUBUK TEMU PUTIH (*Curcuma zedoaria*) TERHADAP KADAR LIPID DARAH MENCIT (*Mus musculus*) JANTAN HIPERLIPIDEMIA

ABSTRAK

Hiperlipidemia atau kondisi lipid darah yang tinggi adalah salah satu faktor yang dapat meningkatkan terjadinya penyakit kardiovaskular. Temu putih (*Curcuma zedoaria*) merupakan tumbuhan yang memiliki banyak senyawa bioaktif yang dapat menurunkan kadar lipid darah. Penelitian ini bertujuan untuk mengetahui pengaruh bubuk rimpang temu putih terhadap berat badan, organ, dan kadar lipid darah pada mencit yang mengalami kondisi hiperlipidemia. Desain penelitian berupa Rancangan Acak Lengkap (RAL) dengan tujuh perlakuan (kontrol positif, kontrol negatif, kontrol obat simvastatin, 6 mg/30 g BB/hari, 12 mg/30 g BB/hari, 24 mg/30 g BB/hari, dan 48 mg/30 g BB/hari) dan lima pengulangan. Mencit jantan diinduksi lemak selama 20 hari lalu diberi perlakuan temu putih dengan sonde oral selama 30 hari. Sampel darah diambil dari *vena caudalis* lalu dihitung kadar lipid darahnya menggunakan metode CHOD-PAP, GPO-PAP, dan Friedwald. Hasil data lalu dianalisis statistik menggunakan *one way* ANOVA. Hasil penelitian menyatakan bahwa pemberian bubuk rimpang temu putih tidak berpengaruh terhadap berat badan dan berat organ mencit tetapi berpengaruh menurunkan kolesterol, trigliserida, dan LDL serta meningkatkan HDL darah mencit. Bubuk rimpang temu putih dapat menurunkan kadar kolesterol pada dosis 48 mg/30 g BB/hari ($92,80 \pm 10,14$ mg/dL), kadar trigliserida pada dosis 24 mg/30 g BB/hari ($53,26 \pm 1,83$ mg/dL), kadar LDL pada dosis 6 mg mg/30 g BB/hari ($36,00 \pm 10,66$ mg/dL), dan meningkatkan kadar HDL dapat pada dosis 6 mg/30 g BB/hari ($56,39 \pm 0,39$ mg/dL).

Kata kunci: Temu Putih, *Curcuma zedoaria*, Hiperlipidemia, Kadar Lipid Darah, Mencit.

THE EFFECTS OF WHITE TURMERIC (*Curcuma zedoaria*) POWDER ON BLOOD LIPID LEVEL OF HYPERLIPIDEMIA MALE MICE (*Mus musculus*)

ABSTRACT

Hyperlipidemia or condition of high blood lipid levels is one of the factor that could increase the incidence of cardiovascular disease. White turmeric (*Curcuma zedoaria*) is a plant that has many bioactive compounds that can lower blood lipid levels. The purpose of this study was to determine the effect of white turmeric rhizome powder on body weight, organ and blood lipid levels in hyperlipidemia mice. Complete randomized design (CRD) was used as the design for this study with seven treatments (positive control, negative control, drug control (simvastatin), 6 mg / 30 g bw / day, 12 mg / 30 g bw / day, 24 mg / 30 g bw / day, and 48 mg / 30 g bw / day) and five repetitions. Male mice were fat induced for 20 days then treated with white turmeric rhizome powder by oral sonde for 30 days. Blood samples were taken from the vena caudalis and blood lipid levels are calculated using the CHOD-PAP, GPO-PAP, and Friedwald. The results then analyzed statistically using one-way ANOVA. The results of study states that white turmeric rhizome powder has no effect on lowering body weight and organ weight in mice but it has effects on decreasing cholesterol, triglyceride, and LDL and increasing HDL. It has effects on decreasing cholesterol levels in a dose of 48 mg/30 g bw/day ($92,80 \pm 10,14$ mg/dL), decreasing triglyceride levels at a dose of 24 mg /30 g bw/day ($53,26 \pm 1,83$ mg/dL), decreasing LDL levels at doses of 6 mg mg/30 g bw/day ($36,00 \pm 10,66$ mg/dL), and increasing HDL levels at a dose of 6 mg/30 g BB/day ($56,39 \pm 0,39$ mg / dL).

Key word: White Turmeric, *Curcuma zedoaria*, Hyperlipidemia, Blood Lipid Level, Mice.