

# Pengaruh pemberian madu ps (pollen substitute) terhadap penurunan konsentrasi kolesterol total pada tikus (*rattus norvegicus* l.) jantan galur sprague dawley = Effect of pollen substitute honey on the blood total cholesterol concentration in male sprague dawley rats *rattus norvegicus* l.) fed with a hyperlipidemic diet

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## Abstrak

Telah dilakukan penelitian yang bertujuan untuk mengetahui pengaruh pemberian madu PS (Pollen substitute) terhadap penurunan konsentrasi kolesterol total plasma darah tikus putih jantan. Dua puluh empat ekor tikus putih jantan dibagi dalam 4 kelompok, yaitu kelompok kontrol normal (KK1) yang hanya diberi akuades, kelompok kontrol perlakuan (KK2) yang diberi diet lemak tinggi dan akuades, dan 2 kelompok perlakuan (KP1 dan KP2) yang diberi diet lemak tinggi, Propylthiouracil (PTU) dan madu PS dengan konsentrasi berturut-turut 10% dan 20%. Bahan uji diberikan setiap hari selama 14 hari. Pengambilan darah dilakukan pada hari ke-0 (T0) dan hari ke-14 (T14). Analisis konsentrasi kolesterol total dilakukan dengan metode Cholesterol Oxidase Para Aminophenazone (CHOD-PAP).

Hasil uji anova satu faktor ( $P < 0,05$ ) pada akhir penelitian menunjukkan adanya pengaruh nyata pemberian madu PS terhadap konsentrasi kolesterol total pada semua kelompok perlakuan. Hasil uji LSD ( $P < 0,05$ ) menunjukkan penurunan kolesterol total pada seluruh kelompok perlakuan (KP1 dan KP2). Penurunan konsentrasi kolesterol total terbesar dicapai oleh kelompok perlakuan konsentrasi 20% (KP2) dengan persentase penurunan mencapai 16,22% dibandingkan terhadap KK2. Berdasarkan hasil tersebut dapat disimpulkan bahwa pemberian madu PS dapat menurunkan konsentrasi kolesterol total secara signifikan.

.....The study was undertaken to assess the effect of pollen substitute (PS) honey on blood total cholesterol concentration of Sprague Dawley rats (*Rattus norvegicus* L.). Twenty four rats were divided into four treatment groups, consisting of a normal control group (KK1) which had no high lipid diet treatment; a treatment control group (KK2); which was fed with a high lipid diet only; and two treatment groups (KP1 and KP2) which were fed .with a high lipid diet, Propylthiouracil (PTU), and PS honey at different concentrations, 10% and 20% respectively, for 14 consecutive days. The treatment was carried out by gavage method. The concentrations of blood total cholesterol were analyzed with Cholesterol Oxidase Para Aminophenazone (CHOD-PAP) method.

One way anova test ( $P < 0,05$ ) showed that blood total cholesterol concentrations decreased significantly. LSD test ( $P < 0,05$ ) showed that the decreased blood total cholesterol concentration occurred at both treatment groups (KP1 and KP2). The concentration of blood total cholesterol reduced into the normal range. Even though the reducing effect of PS honey was showed at both doses of 10% and 20%, the more prominent result was gained by the later one. It is concluded that feeding with PS honey significantly lowered blood total cholesterol concentration.