PENGARUH PEMBERIAN SARI MARKISA UNGU (*Passiflora edulis var edulis)* TERHADAP PROFIL LIPID TIKUS PUTIH (*Rattus norvegicus)* JANTAN MODEL DIABETES MELITUS

ABSTRAK

Diabetes melitus (DM) merupakan salah satu penyakit metabolik yang ditandai dengan peningkatan kadar glukosa darah (hiperglikemia) dan gangguan metabolisme karbohidrat, protein, dan lemak. Gangguan metabolisme lemak pada DM dapat ditandai dengan peningkatan kolesterol total, trigliserida, LDL, dan penurunan HDL. Markisa ungu memiliki berbagai kandungan zat gizi yang dapat memperbaiki profil lipid. Tujuan dari penelitian ini untuk mengetahui pengaruh pemberian sari markisa ungu *(Passiflora edulis var edulis)* terhadap kadar profil lipid tikus putih *(Rattus norvegicus*) jantan model DM. Parameter profil lipid yang digunakan terdiri dari kolesterol total, trigliserida, LDL, dan HDL. Penelitian eksperimental murni dengan *post test with control group design* ini menggunakan 25 ekor tikus putih jantan Galur Wistar dan dibagi dalam 5 kelompok I) kontrol normal, II) kontrol DM, dan III, IV, V perlakuan sari markisa ungu dosis1, 05; 2,1; dan 4,2 mL/200 gBB/hari melalui sonde selama 21 hari. Induksi DM dengan aloksan intraperitoneal 120 mg/kgBB dosis tunggal dan dinyatakan berhasil induksi apabila kadar glukosa darah puasa hewan coba ≥ 200 mg/dL. Profil lipid diukur menggunakan *metode enzimatic-photometric*. Data dianalisis menggunakan uji parametrik *One Way ANOVA* dan uji non parametrik *Kruskal Wallis*. Hasil penelitian menunjukkan tidak terdapat perbedaan signifikan profil lipid antar kelompok (p>0, 05), yaitu nilai p= 0,466 pada kolesterol total, p= 0,066 pada trigliserida, p= 0,769 pada LDL, dan p= 0,092 pada HDL. Kesimpulan penelitian ini adalah pemberian sari markisa ungu *(Passiflora edulis var edulis)* tidak dapat menurunkan kadar kolesterol total, trigliserida, dan LDL serum. Namun dapat meningkatkan kadar HDL serum tikus *(Rattus norvegicus)* jantan model DM.

Kata kunci : diabetes melitus, HDL, kolesterol total, LDL, *passiflora edulis var edulis*, trigliserida

THE EFFECT OF PURPLE PASSION [Passiflora edulis var edulis] JUICE ON THE LIPID PROFILE OF DIABETES MELLITUS WISTAR RAT OFFSPRING

ABSTRACT

Diabetes mellitus (DM) is a metabolic disorder characterized by increased blood glucose (hyperglycemia) and impairment of metabolism carbohydrate, protein, and lipid. Impairment of metabolism lipid characterized by increased total cholesterol, trigliserid, LDL, and decreased HDL. Purple passion fruit contains much nutritions that can improved lipid profile. The aim of this study was to determine the effect of purple passion fruit juice (Passiflora edulis var edulis) on serum lipid profile of male DM rats (Rattus norvegicus). The profile lipid's parameter were observed total cholesterol, trigliserid, LDL, and HDL. This true experimental study used 25 Wistar strain male rats (Rattus norvegicus) which were divided into 5 groups: I (normal control), II (DM control), and III, IV, V purple passion fruit juice treatment dose of 1.05ml, 2.1ml, and 4.2ml/200gBW/day, respectively, through sonde for 21 days. Diabetes induction was made intraperitoneal by a single dose of alloxan 120mg/kgBW and was successful if the blood glucose levels >200 mg/dL. Lipid profile were analyzed with enzymatic-photometric method. The result of this experiment were analyzed by One Way ANOVA parametric test and Kruskal-wallis non-parametric test. The result of this experiment is there is no significant effect lipid profile between groups (p>0, 05) with p value for total cholesterol p=0,466, trigliserid p= 0,066, LDL p= 0,769, and HDL p= 0,092. The conclusion of this study is that the present of purple passion fruit (Passiflora edulis var edulis) can not reduce levels of total cholesterol, triglicerid, and HDL levels. However, it can increase serum HDL levels of male DM rats (Rattus norvegicus).

Keywords: *diabetes mellitus, HDL, kolesterol total, LDL, passiflora edulis var edulis, trigliserida*