

**PENGARUH SARI BUAH MARKISA UNGU (*Passiflora edulis var edulis*)
TERHADAP KADAR LDL-HDL TIKUS PUTIH JANTAN (*Rattus
norvegicus*) MODEL HIPERKOLESTEROLEMIA**

ABSTRAK

Latar belakang: Hiperkolesterolemia adalah peningkatan kolesterol dalam darah yang dapat memicu terjadinya aterosklerosis, salah satunya disebabkan oleh ox-LDL dengan radikal bebas. Markisa ungu diketahui memiliki efek antioksidan yang diharapkan mampu meningkatkan kadar HDL dan menurunkan kadar LDL.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh pemberian sari buah markisa ungu (*Passiflora edulis var edulis*) terhadap kadar LDL-HDL serum tikus (*Rattus norvegicus*) jantan model hiperkolesterolemia. Tiga puluh ekor tikus dibagi lima kelompok; KI (kontrol sehat), KII (kontrol sakit), dan 3 kelompok perlakuan sari markisa ungu (1,1 mL/200gBB/hari; 2,1 mL/200gBB/hari dan 4,2 mL/200gBB/hari). Induksi hiperkolesterolemia pada KII, KIII, KIV dan KV menggunakan minyak babi dan telur bebek dilakukan selama 10 hari kemudian dilanjutkan sari markisa ungu selama 14 hari.

Hasil: Uji *Wilcoxon* kadar HDL pada kelima kelompok menunjukkan hasil yang signifikan pada kelompok III ($p=0,046$), kelompok IV ($p=0,046$), kelompok V ($p=0,046$). Uji *Kruskal Wallis* kadar HDL *post* perlakuan didapatkan nilai p sebesar 0,543. Uji *One Way Anova* kadar LDL didapatkan hasil ($p=0,021$) dan *post hoc LSD* terdapat perbedaan signifikan rerata kadar LDL kelompok III terhadap kelompok V ($p=0,020$) dan kelompok V terhadap kelompok IV ($p=0,036$). Uji *T-test* berpasangan pada *post* induksi dan *post* perlakuan didapatkan penurunan kadar LDL signifikan pada kelompok V ($p=0,034$).

Kesimpulan: Hasil penelitian ini dapat disimpulkan bahwa sari markisa ungu berpengaruh terhadap peningkatan kadar HDL dan penurunan kadar LDL. Sari markisa dosis 4,2 mL/200gBB/hari paling efektif dalam menurunkan kadar LDL pada tikus model hiperkolesterolemia.

Kata kunci: HDL, LDL, Hiperkolesterolemia, *Passiflora edulis*, Antioksidan

THE EFFECT OF *Passiflora edulis var edulis* JUICE ON LDL-HDL LEVEL OF HYPERCHOLESTEROLEMIA RAT MODELS

ABSTRACT

Background: Hypercholesterolemia is the increase of cholesterol in the blood that can lead to atherosclerosis by ox-LDL with free radicals. *Passiflora edulis var edulis* is known to have antioxidant effect which is expected to increase HDL level and decrease LDL level.

Purpose: The purpose of this study is to analyze the effect of *Passiflora edulis var edulis* juice on serum LDL-HDL of hypercholesterolemia rat models. Thirty rats were divided into five groups: KI (healthy control), KII (sick control), and three *Passiflora edulis var edulis* treatment groups (1,1 mL/200gBW/day; 2,1 mL/200gBW/day and 4,2 mL/200gBW/day). Hypercholesterolemia induction of KII, KIII, KIV and KV was done using pig fat oil and duck eggs for ten days. And then followed by administration of *Passiflora edulis var edulis* for 14 days.

Result: Wilcoxon test of HDL level in five groups showed significant result in KIII ($p=0,046$), KIV ($p=0,046$), KV ($p=0,046$). Kruskal Wallis test of post treatment HDL level had p value 0,543. One Way Anova test showed significant difference of mean LDL level ($p=0,021$) and post hoc LSD showed significant difference of mean LDL level, KIII to KV ($p=0,020$) and KV to KIV ($p=0,036$). Paired T-test was done to analyze post induction and post treatment LDL. LDL level was significantly decreased in KV ($p=0,034$) study.

Conclusion: In conclusion, *Passiflora edulis var edulis* increased HDL level and decreased LDL level. *Passiflora edulis var edulis* 4,2 mL/200gBW/day was effective in lowering LDL level of hypercholesterolemia rat models.

Keywords: HDL, LDL, Hypercholesterolemia, *Passiflora edulis*, Antioxidant