

**PENGARUH SARI BUAH MARKISA UNGU (*Passiflora edulis var edulis*)
DAN SIMVASTATIN TERHADAP KADAR C-REACTIVE PROTEIN
(CRP) PADA TIKUS PUTIH (*Rattus norvegicus*) JANTAN GALUR
WISTAR MODEL HIPERKOLESTEROLEMIA**

ABSTRAK

Latar Belakang : Kadar CRP serum adalah *prognostic marker* pada kondisi hiperkolesterolemia di mana peningkatannya mengindikasikan inflamasi akibat disfungsi endotel dan kerusakan jaringan. Flavonoid yang terkandung dalam markisa ungu berfungsi sebagai antiinflamasi yang dapat menurunkan kadar CRP. Efek pleiotropik simvastatin (*first choice of drugs* pada hiperkolesterolemia) sebagai agen antiinflamasi dapat menurunkan kadar CRP.

Tujuan : Mengetahui perbandingan kadar CRP pada tikus putih (*Rattus norvegicus*) jantan galur Wistar model hiperkolesterolemia kelompok perlakuan sari buah markisa ungu (*Passiflora edulis var edulis*) dan kelompok Simvastatin.

Metode : Penelitian dilakukan secara *Completed Randomized Design* dengan pendekatan *post-test only with control group design*. Sebanyak 24 ekor tikus dibagi dalam 4 kelompok, kelompok 1 (kontrol sehat), kelompok 2 (kontrol negatif), kelompok 3 (perlakuan sari markisa), kelompok 4 (perlakuan simvastatin). Kadar CRP diukur menggunakan *Rat HS-CRP ELISA Kit*. Hasil dianalisis statistik dengan metode *One-Way ANOVA*.

Hasil : Rerata kadar CRP terendah ditemukan pada kelompok 3 $272,39 \pm 5,25$, sementara kelompok 4 memiliki rerata kadar tertinggi dengan $290,14 \pm 7,79$. Uji ANOVA menunjukkan nilai $p=0,717$. Uji *post-hoc* tidak dilakukan.

Kesimpulan : Pemberian sari buah markisa ungu dan simvastatin memiliki potensi untuk menurunkan kadar CRP tikus putih jantan galur Wistar model hiperkolesterolemia

Kata kunci : CRP, markisa ungu, hiperkolesterolemia, simvastatin

**THE EFFECT OF PURPLE PASSION FRUIT (*Passiflora edulis var edulis*)
ESSENCE AND SIMVASTATIN ON C-REACTIVE PROTEIN LEVEL OF
HYPERCHOLESTEROLEMIA-INDUCED MALE WISTAR WHITE RAT
(*Rattus norvegicus*)**

ABSTRACT

Background : In hypercholesterolemic condition, CRP level is used as a prognostic marker where its elevation indicates the inflammation caused by endothelial dysfunction and tissue damage. Purple passion fruit (*Passiflora edulis var edulis*) is rich of antiinflammatory flavonoids to reduce the CRP levels. Pleiotropic effect of simvastatin as antiinflammatory agent is able to reduce the CRP levels.

Aim : This research was aimed to learn the effect of purple passion fruit essence and simvastatin on CRP levels of hypercholesterolemia-induced white male Wistar rat.

Method : This research was an experimental study with Completed Randomized Design. We used post-test only with control group design approach. All of 24 rats was divided into group 1 (healthy control), group 2 (negative control), group 3 (passion fruit treatment), group 4 (simvastatin treatment). CRP level was measured with Rat HS-CRP ELISA Kit. Statistical analysis was done with One-Way ANOVA test. Post-hoc test was not conducted.

Result : The lowest mean CRP level was found on group 3 ($272,39 \pm 5,25$), while group 4 had the highest mean at $290,14 \pm 7,79$. ANOVA test showed $p= 0,717$.

Conclusion : Purple passion fruit essence and simvastatin treatments have the potential to reduce on CRP levels on hypercholesterolemia-induced white male Wistar rats.

Keywords : CRP, purple passion fruit, hypercholesterolemia, simvastatin