

# Efek ekstrak daun sirsak (*Annona muricata* Linn) terhadap profil lipid tikus putih jantan (*Rattus Norvegicus*)

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## ABSTRACT

**Background** : Lipid profile effects is a risk factor for Coronary Heart Disease. Soursop leaves (*Annona muricata* L) is a traditional medicine plant containing metabolic compounds that contribute to the improvement of the lipid profile.

**Objective** : To determine the effects of soursop leaves extract on lipid profile (total cholesterol, LDL cholesterol, HDL cholesterol and triglyceride).

**Methods** : An experimental study using randomized pre-posttest with control group design. Sample consisted of 28 male Wistar rats, were divided into four groups. The control group (K) was only given High Fat High Cholesterol (HFHC) diet and treatment groups (P1, P2, P3) were given a HFHC diet plus *Annona muricata* L extract with doses of 100, 200 and 300 mg/kgBB per day for 28 days respectively. Data were analyzed by Wilcoxon test, Kruskal-Wallis and Mann Whitney.

**Results** : The mean total cholesterol level significantly decreased in the treatment group P1 ( $p = 0.028$ ) from 60.7 mg/dl (47.6-75.3) to 45.5 mg/dl (38.4-62.4). Mean HDL cholesterol level significantly increased in the treatment group P2 ( $p=0.043$ ) from 26.0 mg/dl (19.7-35.3) to 27.9 mg/dl (18.8-38.0). The mean levels of LDL cholesterol and triglyceride decreased but not significantly.

**Conclusion** : The administration of *Annona muricata* L extract can decrease total cholesterol and increase HDL cholesterol significantly.

**Keywords**: lipid profile (total cholesterol, LDL cholesterol, HDL cholesterol and triglyceride), HFHC diet, *Annona muricata* L

## ABSTRAK

**Latar Belakang** : Profil lipid merupakan salah satu faktor risiko terjadinya penyakit jantung koroner. Daun sirsak merupakan tanaman obat tradisional yang mengandung berbagai senyawa metabolik yang berperan terhadap perbaikan profil lipid.

**Tujuan** : Mengetahui efek ekstrak daun sirsak terhadap profil lipid ( kadar kolesterol total, kolesterol LDL, kolesterol HDL dan trigliserida).

**Metoda** : Studi eksperimen dengan rancangan penelitian randomized pre-posttest with control group design pada 28 tikus Wistar jantan yang dibagi menjadi 4 kelompok. Kelompok kontrol (K) hanya diberikan diet tinggi lemak tinggi kolesterol dan kelompok perlakuan (P1,P2,P3) diberikan diet tinggi lemak tinggi kolesterol dan ekstrak daun sirsak dengan dosis masing-masing 100,200,dan 300 mg/kgBB per hari selama 28 hari. Analisis data yang digunakan adalah uji Wilcoxon, Kruskal-Wallis dan Mann Whitney.

**Hasil** : Rerata kadar kolesterol total menurun signifikan pada kelompok perlakuan P1 ( $p=0,028$ ) dari 60,7 mg/dl (47,6-75,3) menjadi 45,5 mg/dl (38,4-62,4). Rerata kadar kolesterol HDL meningkat signifikan pada kelompok perlakuan P2 ( $p=0,043$ ) dari 26,0 mg/dl (19,7-35,3) menjadi 27,9 mg/dl (18,8-38,0). Rerata kadar kolesterol LDL dan trigliserida menurun meskipun secara statistic tidak signifikan.

**Simpulan** : Pemberian ekstrak daun sirsak secara signifikan dapat menurunkan kadar kolesterol total dan meningkatkan kadar kolesterol HDL.

**Kata Kunci** : Profil lipid (kolesterol total, kolesterol LDL, kolesterol HDL, dan trigliserida), diet tinggi lemak tinggi kolesterol, ekstrak daun sirsak