

ABSTRAK

PEMBERIAN BUAH BUNI (*Antidesma bunius* (L.) Spreng.) TERHADAP KADAR KOLESTEROL TOTAL, LDL, HDL, DAN TRIGLISERIDA PADA MENCIT (*Mus musculus* Linnaeus, 1758) HIPERKOLESTEROLEMIA

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Hiperkolesterolemia dapat dipengaruhi oleh konsumsi lemak berlebih. Untuk menurunkan kadar kolesterol dalam darah, terapi farmakologis dan non-farmakologis dapat digunakan seperti menggunakan HMG CoA reduktase, niasin, dll. Namun, obat-obatan ini memiliki berbagai efek negatif, seperti menyebabkan hilangnya fungsi kognisi hingga disfungsi pankreas dan hati. Salah satu tanaman yang berpotensi menurunkan kadar kolesterol yakni tanaman buni (*Antidesma bunius* (L.) Spreng.). Penelitian ini bertujuan untuk mengetahui pengaruh pemberian jus buah buni (*Antidesma bunius* (L.) Spreng.) dan konsentrasi jus buah buni (*Antidesma bunius* (L.) Spreng.) yang paling efektif menurunkan kadar kolesterol total, LDL, HDL, dan trigliserida pada mencit jantan hiperkolesterolemia. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) yang terbagi dalam 5 kelompok perlakuan dengan masing-masing 5 pengulangan. Hewan coba diberikan Makanan Diet Tinggi Lemak (MDTL) yang memiliki komposisi berupa propiltiourasil (PTU) 1,8 mg/200g BB mencit yang disuspensikan dalam *Pure Grain Alcohol* (PGA) 2% dan kuning telur puyuh 10 mL/KgBB. Perlakuan terdiri kontrol – (pakan standar), kontrol + (MDTL dan simvastatin 0,52 mg), P1 (MDTL dan 1 ml jus buah buni 20%), P2 (MDTL dan 1 ml jus buah buni 25%), dan P3 (MDTL dan 1 ml jus buah buni 30%). Perlakuan P1, P2, dan P3 diberikan MDTL selama 14 hari dan dilanjutkan dengan pemberian jus buah buni selama 14 hari. Data yang diperoleh berupa kadar kolesterol darah total, LDL, HDL, dan trigliserida yang kemudian dianalisis dengan menggunakan uji *One Way ANOVA* dengan taraf $\alpha = 5\%$ dan dilanjutkan dengan uji Duncan pada taraf $\alpha = 5\%$. Hasil penelitian menunjukkan bahwa pemberian jus buah buni dapat menurunkan kadar kolesterol total, LDL, dan trigliserida, tetapi tidak dapat meningkatkan kadar HDL. Selain itu, pemberian buah buni efektif menurunkan kadar kolesterol total pada konsentrasi 30% dengan penurunan sebesar 79%, LDL pada konsentrasi 20% dengan penurunan sebesar 44%, dan trigliserida pada konsentrasi 30% dengan penurunan sebesar 15,58%.

Kata Kunci: *Antidesma bunius* (L.) Spreng., hiperkolesterolemia, profil lipid

ABSTRACT

EFFECT OF JUICE OF BERRY FRUIT (*Antidesma bunius* (L.) Spreng.) ON TOTAL CHOLESTEROL, LDL, HDL, AND TRIGLYCERIDE LEVELS IN MICE (*Mus musculus* Linnaeus, 1758) WITH HYPERCHOLESTEROLEMIA

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Hypercholesterolemia can be influenced by excessive fat consumption. To lower blood cholesterol levels, pharmacological and non-pharmacological therapies can be used such as using HMG CoA reductase, niacin, etc. However, these drugs have various negative effects, such as causing loss of cognitive function to pancreatic and liver dysfunction. One of the plants that has the potential to lower cholesterol levels is the buni plant (*Antidesma bunius* (L.) Spreng.). This study aims to determine the effect of giving berry juice (*Antidesma bunius* (L.) Spreng.) and the concentration of berry juice (*Antidesma bunius* (L.) Spreng.) which is most effective in lowering total cholesterol, LDL, HDL, and triglyceride levels in male hypercholesterolemic mice. This study used a Completely Randomized Design (CRD) which was divided into 5 treatment groups with 5 repetitions each. Experimental animals were given High Fat Diet (MDTL) consisting of propylthiouracil (PTU) 1.8 mg/200g mouse body weight suspended in 2% Pure Grain Alcohol (PGA) and 10 mL/KgBW quail egg yolk. The treatments consisted of control - (standard feed), control + (MDTL and simvastatin 0.52 mg), P1 (MDTL and 1 ml berry juice 20%), P2 (MDTL and 1 ml berry juice 25%), and P3 (MDTL and 1 ml berry juice 30%). Treatments P1, P2, and P3 were given MDTL for 14 days and continued with berry juice for 14 days. The data obtained were total blood cholesterol levels, LDL, HDL, and triglycerides which were then analyzed using the One Way ANOVA test with an α level of 5% and continued with the Duncan test at an α level of 5%. The results of the study showed that giving berry juice can reduce total cholesterol, LDL, and triglyceride levels, but cannot increase HDL levels. In addition, giving berry fruit effectively reduces total cholesterol levels at a concentration of 30% with a decrease of 79%, LDL at a concentration of 20% with a decrease of 44%, and triglycerides at a concentration of 30% with a decrease of 15.58%.

Keywords: *Antidesma bunius* (L.) Spreng., hypercholesterolemia, lipid profile