ABSTRAK

Wardani, Dinni Yulia Septyanti. 2015. ***Analisa Kadar Leptin Serum pada Tikus Rattus norvegicus galur Wistar Jantan yang Diberi Diet Aterogenik Modifikasi Standar AIN-93M dan Diet Normal Standar AIN-93M***. Tugas Akhir, Program Studi Ilmu Gizi Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Mira Mutiyani, MSc. (2) Kanthi Permaningtyas Tritisari, S.Gz, M.PH.

Pemberian diet aterogenik modifikasi standar AIN-93M dengan penambahan asam kolat dan kolesterol dapat menimbulkan obesitas pada tikus, dimana kondisi obesitas dapat meningkatkan kadar leptin dalam darah (hiperleptinemia). Leptin merupakan salah satu parameter respon inflamasi dari aterosklerosis. Penelitian ini bertujuan untuk mengetahui perbedaan kadar leptin pada tikus *Rattus norvegicus* galur *Wistar* jantan yang diberi diet aterogenik modifikasi standar AIN-93M dan diet normal standar AIN-93M. Jenis penelitian ini adalah *true experimental laboratory* dengan *randomized control group posttest design* dengan subjek tikus wistar jantan sebanyak 32 ekor yang dibagi menjadi dua kelompok. Kelompok P1 diberikan diet aterogenik modifikasi standar AIN-93M dan kelompok P2 diberikan diet normal standar AIN-93M yang diberikan selama 12 minggu. Asupan rata-rata diet aterogenik modifikasi standar AIN-93M (P1) sebesar 8.73±2.23 gram dan diet normal standar AIN-93M (P2) sebesar 10.41±1.18 gram. Pengukuran kadar leptin dilakukan dengan menggunakan metode *ELISA*. Hasil penelitian menunjukan bahwa nilai kadar leptin pada kelompok aterogenik sebesar 5.91±1.21 ng/ml dan kelompok normal sebesar 4.87±0.49 ng/ml. Berdasarkan hasil uji statistik menggunakan *independent t-test* didapatkan bahwa hasil p=0.084 (p>0.05) untuk rata-rata kadar leptin pada P1 dan P2. Berdasarkan penelitian ini dapat disimpulkan bahwa tidak terdapat perbedaan yang signifikan kadar leptin pada tikus *Rattus norvegicus* galur *Wistar* yang diberi diet aterogenik modifikasi standar AIN-93M dan diet normal standar AIN-93M.

Kata Kunci: aterosklerosis, kadar leptin, diet standar AIN-93M, diet aterogenik.

ABSTRACT

Wardani, Dinni Yulia Septyanti. 2015. ***Analysis of Serum Leptin Levels in Male Rats (Rattus norvegicus strain Wistar) Fed with Standard Modification Atherogenic Diet AIN-93M and Standard Normal Diet AIN-93M***. Final Assignment, Health Nutrition Program, Medical Faculty of Brawijaya University. Supervisor: (1) Mira Mutiyani, MSc. (2) Kanthi Permaningtyas Tritisari, S.Gz, M.PH.

Administration of standard modification atherogenic diet AIN-93M with cholic acid and cholesterol addition could induce obesity in rat, which is the condition of obesity could increase leptin in blood (hyperleptinemia). Leptin is one of inflammatory responds parameter of atherosclerosis. The aim of this study is to determine the differences of leptin level between male rats *Rattus novergicus Wistar* which fed using standard modification atherogenic diet AIN-93M and standard normal diet AIN-93M. Type of this study is true experimental laboratory with randomized control group post-test design using 32 male *Wistar* rats which divided into 2 groups as the subject. Standard modification atherogenic diet AIN-93M is given to Group P1, while standard the normal diet AIN-93M is given to Group P2 for 12 weeks. The average intake of standard modification atherogenic diet AIN-93M (P1) is 8.73±2.23 grams and standard normal diet AIN-93M (P2) is 10.41±1.18 grams. Leptin level is measured using *ELISA* method. The result of this study showed that leptin level value in atherogenic group is 5.91±1.21 ng/ml and in normal group us 4.87±0.49 ng/ml. Based on the statistic test result using independent t-test, p=0.084 (p>0.05) was obtained as the result of average leptin level in P1 and P2. Based on this study, could be concluded that there is no significant difference of leptin level in male rats *Rattus novergicus Wistar* which is fed using standard modification atherogenic diet AIN-93M and standard normal diet AIN-93M.

Keywords: atherosclerosis, leptin level, standard diet AIN-93M, atherogenic diet.