

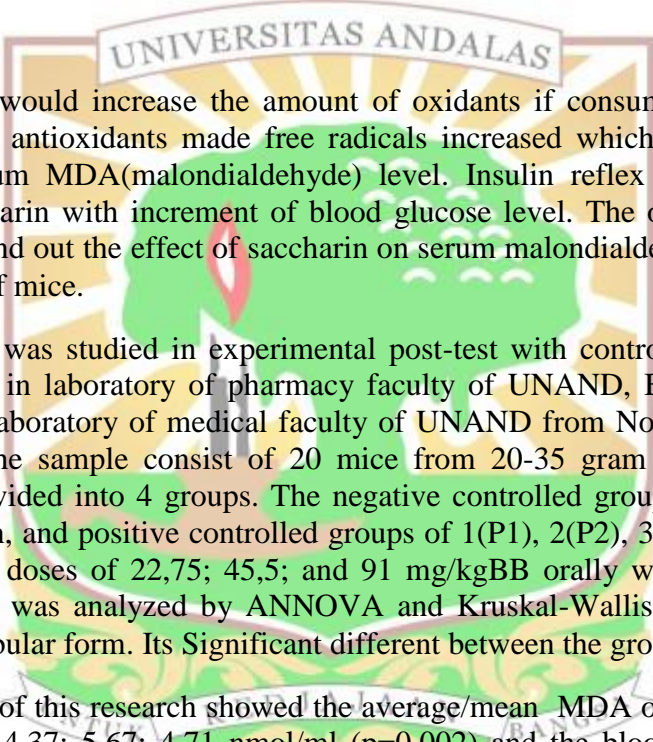
ABSTRACT

THE EFFECT OF SACCHARIN ON SERUM MALONDIALDYHYDE AND BLOOD GLUCOSE LEVEL OF MICE

(*MUS MUSCULUS*)

BY

ANATHARAO



Saccharin would increase the amount of oxidants if consume in long term which, lack of antioxidants made free radicals increased which was signed by increasing serum MDA(malondialdehyde) level. Insulin reflex took part once consume saccharin with increment of blood glucose level. The objective of this study was to find out the effect of saccharin on serum malondialdehyde and blood glucose level of mice.

The study was studied in experimental post-test with control group design, and conducted in laboratory of pharmacy faculty of UNAND, Bio-medical and Biochemistry laboratory of medical faculty of UNAND from November 2016 to April 2017. The sample consist of 20 mice from 20-35 gram in weight each which were divided into 4 groups. The negative controlled group (KN) was not given saccharin, and positive controlled groups of 1(P1), 2(P2), 3(P3) were given saccharin with doses of 22,75; 45,5; and 91 mg/kgBB orally within 4 week of time. The data was analyzed by ANNOVA and Kruskal-Wallis test, and result presented in tabular form. Its Significant different between the groups if $p < 0.005$

The result of this research showed the average/mean MDA of KN,P1,P2,and P3 were 2,68; 4,37; 5,67; 4,71 nmol/ml ($p=0,002$) and the blood glucose level were 64,80; 45,40; 45,20; and 40,40 g/dL ($p=0,005$). It could be concluded that saccharin increases the serum MDA level and decreases the blood glucose level.

Keywords: Malondialdehyde, Serum, Saccharin, Blood Glucose

ABSTRAK

EFEK PEMBERIAN SAKARIN TERHADAP KADAR *MALONDIALDEHYDE* SERUM DAN GLUKOSA DARAH MENCIT (*MUS MUSCULUS*)

OLEH

ANATHARAO

Sakarín bisa meningkatkan kadar MDA serum dengan terjadi ketidakseimbangan antara oksíden dan antioksidén apabila dikonsumsi pada jangka waktu lama. Pelepasan refleks insulin terjadi apabila dikonsumsi sakarín .Ya meningkatkan kadar glukosa darah. Penelitian ini bertujuan untuk mengetahui efek pemberian sakarín terhadap kadar *malondialdehyde* serum dan glukosa darah mencit.

Penelitian ini merupakan penelitian eksperimental *posttest with control group design*, dilakukan di laboratorium Fakultas Farmasi UNAND, laboratorium Biomedik, dan Biokimia FK UNAND pada bulan November 2016 sampai dengan April 2017. Sampel terdiri dari 20 ekor mencit dibagi 4 kelompok dengan berat 20-35 gram. Kelompok kontrol (KN) tidak diberikan sakarín, perlakuan 1 (P1), 2 (P2), dan 3 (P3) diberi sakarín dosis 22,75; 45,5; dan 91 mg/kgBB secara oral selama 4 minggu. Data diolah dengan uji ANOVA dan uji *Kruskal-Wallis* serta disajikan dalam bentuk tabel. Perbedaan antara kelompok bermakna jika $p < 0,05$.

Hasil penelitian menunjukkan rerata kadar MDA serum KN, P1, P2, dan P3 sebesar 2,68; 4,37; 5,67; dan 4,71nmol/ml ($p=0,002$) dan glukosa darah 64,80; 45,40; 45,20; 40,40 gr/dL ($p=0,005$). Dapat disimpulkan bahwa pemberian sakarín dapat meningkatkan kadar MDA serum dan menurunkan glukosa darah.

Kata kunci: sakarín, *malondialdehyde*, serum, glukosa darah

