ABSTRACT

Astutik Hadi Purwaningsih. 2013. **Effect of Brown Rice Flour to The Decline in Total Cholesterol Levels Swiss Webster mice (*Mus musculus L.*) Hypercholesterolemic**. Department of Health, Clinical Nutrition Program, State Polytechnic Jember. Supervisor: Agustina Endah W., S.Sos, M.Kes and dr. Arisanty Nur Setia Restuti.

This study aimed to determine the effect of brown rice flour to the decline in total cholesterol levels swiss webster mice (*Mus musculus L.*) hypercholesterolemia. This research is an experimental (experimental laboratoric) to design pre-test and post-test. The sample was 24 mice were taken by simple random sampling in accordance with the inclusion and exclusion criteria were given a diet high in cholesterol such as egg yolks 0.875 g / cow for 14 days, on day 22, total cholesterol level examination pre-test later on 37th day of examination post-test cholesterol levels that were previously provided treatment for 14 days. Samples were divided into 4 treatment groups, the positive control group (K +), ezetimibe drug treatment of 0,026 mg (P1), brown rice flour treatment of 3.12 mg (P2) and brown rice flour treatment of 6.24 mg (P3). The results of a comparative study of total cholesterol pre and post-test for each group using the Wilcoxon test (α <0,05). Wilcoxon test results showed that there were significant differences in total cholesterol test results in group P1 (α = 0.028) and P3 (α = 0.027). Further examination of the difference between pre and post-test between groups were tested receipts Kruskal-Wallis test (α <0,05). Kruskal-Wallis test results showed that there were significant differences in total cholesterol levels decreased the difference between each group (α = 0.016). To determine the level of effectiveness of the treatment performed Mann-Whitney test (α <0,05). Mann-Whitney test results showed that the group P1 (α = 0.004) more effective in reducing total cholesterol than the group P3 (α = 0.025). The conclusion of this research is the treatment of brown rice flour 3,12 mg and 6.24 mg effect in lowering total cholesterol, but ezetimibe drug treatment 0,026 mg is more effective in lowering total cholesterol mice hypercholesterolemic.

Keywords: brown rice flour, total cholesterol.