



[ABS-51]

## Comparison of The Effectiveness of Fermented Tiwai Onions and Lanang Onions on High Density Lipoprotein Levels in Sprague Dawley Dyslipidemia Rats

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### ABSTRACT

**Background:** Dyslipidemia is a condition of an abnormal lipid profile in the blood that can be prevented by non-pharmacological therapy such as adjusting diet. The diet that can be applied is to consume foods that are sources of dietary fiber, especially soluble fiber and antioxidants. One type of antioxidant that can help lower blood cholesterol levels is the flavonoids found in tiwai onions and lanang onions.

**Purpose:** to determine the effectiveness of lanang onions and tiwai onions on cholesterol in Sprague Dawley rats

**Methods:** This research is pure experimental research using controls. The experimental animals used were two-month-old Sprague Dawley rats. The four groups were given a high cholesterol diet with the addition of egg yolk to their feed for 2 weeks. After the mice experienced dyslipidemia, the mice were divided into 4 groups. These groups included group 1 which was given fermented tiwai onions at a dose of 200 mg/kgBW, group 2 was given fermented lanang onions (black garlic) at a dose of 200 mg/kgBW, group 3 was a control, namely mice that were given distilled water and continued to be given a high fat diet, the fourth group, namely mice, were given simvastatin 15mg/kgBB and each group consisted of 5 mice.

**Results:** There are significantly difference of HDL after treatment between groups in ANNOVA test p-value=0,00. Tukey HSD test show there was a difference in the average HDL in the control group and the group given simvastatin, while there was no difference between the HDL levels of the group given fermented onion tiwai and lanang onion. The experimental animal group given the fermentation treatment of tiwai onions and lanang onions had a higher average HDL value than the control and simvastatin with p value <0.05

**Conclusion:** Fermented onion and onion administration were equally effective in increasing blood HDL levels in the treatment group. this is shown by the difference in average HDL levels with the control group and the treatment given simvastatin

**Keywords:** Dyslipidemia; High Density Lipoprotein; Lanang Onion; Tiwai Onion

**Topic:** Caring for Communicable and Non-Communicable Diseases