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Sub-acute effects on *Lactobacillus plantarum* dad-13 fermented soy milk on lipid profiles and blood pressure in hypercholesterolemia rats

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Background: Hypercholesterolemia is risk factor of many diseases. Lipid profile degeneration and high blood pressure may lead to earlier death. Processed soy products, namely soy milk, contain high isoflavones levels which usually can be used as antioxidants. However, community acceptance of soy milk in Indonesia is very low because the taste is less favorable. Fermentation can be done to improve taste and flavor of soy milk. Fermented soy milk with *Lactobacillus plantarum* Dad-13 is believed to help in managing blood profile and blood pressure.

Method: 11 male Sprague Dawley rats is induced with high-fat diet, which has been made from a mixture of 80% A.D.II standard diet, 15% melted butter and 5% quail egg yolks, in 2 weeks. *Lactobacillus plantarum* Dad-13 fermented soy milk is given 1.8 ml/day to treatment group for the next 5 days. Measurement of blood pressure and blood lipid levels were performed at the end. ANOVA is used to analysis each parameter with $p<0.05$ is considered significant.

Results: After treatment for 5 days, there's no significant change in cholesterol, triglycerides, HDL and LDL levels ($p>0.05$). Blood pressure hasn't been found significant change in each group ($p>0.05$).

Conclusion: Induction of *Lactobacillus plantarum* Dad-13 fermented soy milk for 5 days has not had a significant effect on lipid profile and blood pressure in hypercholesterolemia rats.

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