

The Anti-Obesity Effects of the Aqueous and Ethanolic Leaf Extracts of *Blumea balsamifera* on Diet-Induced Obese Sprague-Dawley Rats

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Abstract : The present study aims to evaluate the effectiveness of aqueous and ethanolic leaf extracts of *Blumea balsamifera* in reducing obesity on diet-induced obese Sprague-Dawley rats. Aqueous and ethanolic leaf extracts were obtained by maceration and percolation, respectively, of air-dried, grinded leaves. The test animals were given a high fat diet (HFD) for 21 days, except for one negative control group fed with a standard diet (SD). The *Blumea balsamifera* extracts were given at doses of 300 mg/Kg and 600 mg/Kg for BBAE and BBEE groups, and the positive control group, Orlistat, was given at 21.6 mg/Kg dose. After 24 days of treatment, the statistical difference of parameters such as Lee's index and lipid profile of each group before and after the treatment period were determined separately using Tukey's test of two-way Analysis of Variance (ANOVA). The statistical results showed that the 600mg/kg dose of BBAE and BBEE had greatly lowered the Lee's index among the other doses while the 300 mg/Kg dose BBEE, 600 mg/Kg BBAE, and 300 mg/kg BBAE lowered the total cholesterol level, LDL level, and VLDL and total triglyceride level respectively. The extracts, however, lowered the HDL level which was also exhibited by the standard drug, Orlistat.

Keywords : adipocytes, adipogenesis, *Blumea balsamifera*, Lee's index, obesity, Sambong

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