

THE EFFECT OF BOLDINE ON BODY COMPOSITION AND CARBOHYDRATE METABOLISM IN OBESE MICE

Beatriz Paes Silva¹, Gustavo Henrique de Souza, Maiara Mikuska Cordeiro, Vinicius Franco de Oliveira, Lívia Bracht, Jurandir Fernando Comar, Rosane Marina Peralta, Adelar Bracht, Anacharis Babeto de Sá-Nakanishi

¹pg55449@uem.br, DBQ/UEM, 0000-0003-1242-7856

Boldine is an alkaloid widely found in boldo leaves. Recent studies have determined its potential effect on glycemic and lipidemia control. Because of this, the objective of this work was to evaluate the effect of boldine on body composition and carbohydrate metabolism in obese mice induced by a high-calorie diet. 21-day-old male Swiss mice were divided into control (standard diet), cafeteria (high-calorie diet) and treatment (boldine 20mg/Kg) groups. After 90 days of treatment, the animals were euthanized, the liver was collected, and epididymal, retroperitoneal, mesenteric and brown fats were weighed. Obese animals increased body and fat weight, but boldine treatment decreased body weight (17%) and abdominal circumference (15%) and reduced retroperitoneal (66%) and mesenteric (33%) fat weight. Obesity altered the activity of glucokinase and glucose 6-phosphatase in the liver. However, the treatment decreased glucose 6-phosphatase activity (30%) and increased glucokinase activity (43%). We conclude that boldine can be a potential preparation for the management and treating obesity.

Keywords: Alkaloid, Obesity, Liver

Funding: CAPES

