



Section E2

601/E2

**Hypolipidemic activity and hypoglycemic effects of banana blossom
(*Musa acuminata* Colla) incorporated experimental diets in Wistar rats**

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Banana blossom is a popular Sri Lankan dish consumed as a curry as well as a boiled or deep fried salad, which is rich in nutrients and antioxidants. The present work was designed to study the hypolipidemic and hypoglycemic effects of banana blossom in high-cholesterol diet fed rats. Whole blossom of Ambul banana were washed and cut into small pieces followed by air and oven drying and ground into powder. Seven months old eighteen Wistar rats were purchased from the Medical Research Institute, Sri Lanka and divided into three experimental groups. All three groups were fed for 4 weeks, with casein as the basal diet (CN), in comparison with two diets containing 0.5% cholesterol (CD) and 0.5% cholesterol + 21% banana blossom powder (CDB). Serum total cholesterol (1.32 ± 0.09 mmol/L), non-HDL cholesterol (0.83 ± 0.10 mmol/L) and serum glucose concentration (2.94 ± 0.31 mmol/L) were significantly lower ($P < 0.05$) in CDB-fed group compared with the CD-fed group. In the CDB-fed group, significantly higher fecal weight (3.72 ± 0.25 g), cecal weight (0.61 ± 0.05 g), cecal Lactobacilli (7.91 ± 0.05 log₁₀cfu/g) and Bifidobacteria (8.32 ± 0.25 log₁₀cfu/g) populations were observed compared to CD and CN diet fed groups. Significantly lower serum AST level (0.74 ± 0.42 Δ A /min) ($P < 0.05$) in banana blossom fed rats was an indication of the reduction in oxidative stress induced by high cholesterol diet. Based on these data, it could be speculated that banana blossom incorporated experimental diets may modulate the hypocholesterolemic and hypoglycemic responses in Wistar rats.

Keywords: Antioxidant, banana blossom, hypoglycemic, hypolipidemic, Wistar rats