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Anti-obesity and hypolipidemic effects of *Cynometra cauliflora* in animal model of obesity

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Cynometra cauliflora is a medicinal plant, belonging to Fabaceae family, traditionally used to treat hyperlipidemia and diabetes. This study investigated the anti-obesity and lipid lowering effects of ethanol extract of *C. cauliflora* leaves (200 and 400 mg/kg) and its major compound (vitexin, 10 mg/kg) on obese mice (C57BL/6) induced by high-fat diet (HFD). Animals were fed with either a standard pellet diet for normal control group or HFD for eight weeks to induce obesity. The oral administration of *C. cauliflora*, for eight weeks, resulted in a significant decrease in body weight gain in mice fed a high-fat diet. Moreover, the oral administration of *C. cauliflora* resulted in a significant reduction of serum triglycerides, total cholesterol, and low-density lipoprotein cholesterol (LDL) levels compared to the HFD control group. Besides, the *C. cauliflora* extract treatment elicited a significant reduction in serum levels of glucose and insulin compared to the HFD control group. In addition, histology examination showed that accumulation of hepatic lipid droplets induced by HFD was reduced markedly by *C. cauliflora*. The present study thus concludes that *C. cauliflora* possess hypolipidemic activity that protects the body against adverse effects of high fat diet-induced obesity, possibly through lipid lowering action and improving the insulin sensitivity. Besides, these findings support traditional knowledge and suggest that *C. cauliflora* may potentially be useful for managing obesity and hyperlipidemia.

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