

Effect of dabai (*Canarium odontophyllum*) fruit extract on biochemical parameters of induced obese–diabetic rats

ABSTRACT

Dabai is one of the most popular indigenous fruits in Sarawak, and is rich in various nutrients. In this study, the effect of dabai fruit extract (300 and 600 mg/kg bw) on the biochemical parameters of obese–diabetic (Ob-db) rats was investigated. After a 4-week treatment period, the dabai extract at a concentration of 600 mg/kg bw (equivalent to 20 g of flesh with skin of fresh fruit) showed a pronounced effect in lowering the plasma glucose level compared with 300 mg extract/kg bw (equivalent to 10 g of flesh with skin of fresh fruit). The dabai extract also significantly reduced the plasma cholesterol and low-density lipoprotein (LDL-c) levels and increased high-density lipoprotein (HDL-c). However, the dabai extract did not increase the insulin level but did increase its sensitivity and reduced insulin resistance (HOMA-IR). This study suggests that dabai extract possesses hypocholesterolaemic properties, has a short-term glucose-lowering effect and improves the lipid profile through synergistic effect of various polyphenols.

Keyword: Dabai; Obese-diabetic; Polyphenol compounds; Glucose; Insulin; Lipid profile