

Attenuation of Pancreatic Histology, Hematology and Biochemical Parameters in Type 2 Diabetic Rats Treated with *Azadirachta excelsa*

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Abstract : *Azadirachta excelsa* or locally known as sentang are frequently used as a traditional medicine by diabetes patients in Malaysia. However, less attention has been given to their toxicity effect. Thus, the study is an attempt to examine the protective effect of *A. excelsa* on the pancreas and to determine possible toxicity mediated by the extract. Diabetes was induced experimentally in rats by high-fat-diet for 16 weeks followed by intraperitoneal injection of streptozotocin at dosage of 35 mg/kg of body weight. Declination of the fasting blood glucose level was observed after continuous administration of *A. excelsa* for 14 days twice daily. This is due to the refining structure of the pancreas. However, surprisingly, the plant extract reduced the leukocytes, erythrocytes, hemoglobin, MCHC and lymphocytes. In addition, the rat treated with the plant extract exhibited increment in AST and eosinocytes level. Overall, the finding shows that *A. excelsa* possesses antidiabetic activity by improving the structure of pancreatic islet of Langerhans but involved in ameliorating of hematology and biochemical parameters.

Keywords : *Azadirachta excelsa*, diabetes, pancreas, hemato-biochemical parameters

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