Hypoglycemic and Hypolipidemic Effect of Active Compounds (Glucokinin or Plant Insulin) from Bauhinia Variegata L. in Alloxan Induced Diabetic Mice

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The study includes the isolation and extraction of some active molecules like (flavonoid and total poly phenolic) and plant insulin (Glucokinin) from leaves and flowers of B. variegata L. belonging to the family Leguminosae which cultivated in Iraq. Also the study employed an in vivo evaluation of Bauhinia leaves (petroleum ether and methanol extract) and methanol extract and flowers extraction in mice at concentrations (200 and 400 mg/kg) for (LM1 and LM2) and (200 mg/kg) for F given intra peritoneal for 10 days after inducing diabetes mellitus type 2 by alloxan (200 mg/1 kg body weight). The serum was isolated from blood by cardiac puncture for the biochemical tests, including glucose, cholesterol (ch), Triglyceride (TG), high density lipoprotein (HDL), low density lipoprotein (LDL) and very low density lipoprotein (VLDL). At day 10 the animal was killed and the liver and pancreas were kept in 10% formalin for preparation of histopathological sections. We concluded that the Plant insulin (Glucokinin) may be responsible for some of the actions at plant extracts for their antidiabetic properties. From the observations, it was concluded that the reduction of blood glucose levels in diabetic rats were found to be dose dependent and also dependent on duration of action. So it might be useful in the treatment of diabetes without toxicity.

Keywords
Bauhinia variegata, Antidiabetic activity, Hyperglycemia, Hypolipidemic