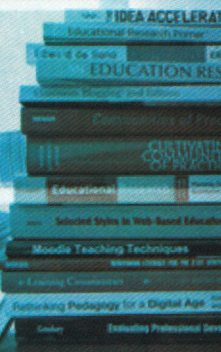




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*Dr. Qamar U. Ahmed -
Pharmacy*



P-235 Isolation Of Anti-Hyperglycemic Agent (WOGONIN) From The Leaves Of *T. Indica* Merr. (Dilleniaceae) (Mempelas Paya)

QAMAR UDDIN AHMED

Bashar B.S. Dogarai, Qamar U. Ahmed, Abdulrashid Umar, Jalifa Latip

Department of Pharmaceutical Chemistry

Kulliyyah of Pharmacy

Diabetes is a chronic disease that has no cure. The National Health and Morbidity Survey 2006 revealed that 14.9 per cent of Malaysians were diabetic. Hence, there is an urgent need to discover new antidiabetic agents to cure this chronic disease efficaciously. Natural products are considered potent candidate for this aim. Present research investigates the antidiabetic activity of aqueous (AQ) and methanol (MEOH) extracts of the leaves of *Tetracera indica* Merr. (Dilleniaceae) in alloxan induced diabetic and normal male albino rats (Sprague Dawley strain). Attempts were also made to isolate active principles. Both AQ and MEOH extracts at 250 and 500 mg/kg b.w. and active principle at 0.5 and 1 mg/kg b.w. were evaluated in vivo. Both extracts exhibited significant anti-hyperglycemic activity in alloxan induced diabetic rats, however in normal rats, no hypoglycemic activity was observed, when compared with +ve and -ve controlled groups. The antidiabetic activity was found to be comparable with glibenclamide (GLBC), a known oral hypoglycemic agent (0.25 mg/kg b.w.). The LD50 of AQ and MEOH extracts were found to be more than 5000 mg/kg b.w. and no lethal toxicity was observed within this range. 5,7-dihydroxy-8-methoxyflavone (wogonin) was identified as an active principle from MEOH extract which revealed significant anti-hyperglycemic activity in vivo comparable to GLBC. Besides active principle, isomeres of β -sitosterol and stigmasterol glycosides; betulinic acid; 5,7,8-trihydroxyflavone; 4 β ,5,7-trihydroxy-8-methoxyflavone; 4 β ,3,5,7-tetrahydroxyflavone; 3 β ,4 β ,3,5,7-pentahydroxyflavone and 5-hydroxy-7-methoxyflavone were also isolated which exist in the leaves of *T. indica* i was reported for the first time. Structures of aforementioned compounds were elucidated through extensive ^1H - & ^{13}C NMR, UV, IR and MASS spectral analysis. Wogonin could prove useful in the management of diabetes. This study provides scientific evidence about the leaves of *T. indica* which possessed antidiabetic agents and further justified its utility by the local herbalists to treat diabetes in Malaysia.