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### **Bioactivity-guided fractionation of the stem bark extract of *Pterocarpus dalbergioides* Roxb. Ex Dc growing in Egypt**

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*Pterocarpus* is a genus including about 60-70 species belonging to family Leguminosae. The powdered stem bark of *Pterocarpus dalbergioides* Roxb. ex DC was extracted with 70% ethanol to yield 1000 g dried residue (6.7% yield). The dried residue (975 g) were fractionated, with petroleum ether (60-80°C), chloroform, ethyl acetate and *n*-butanol saturated with water, respectively. Induction of diabetes in rats followed the method described by Eliasson and Samet. Acute anti-inflammatory activity was evaluated using Carrageenan-induced rat paw edema. Based on antihyperglycemic, anti-inflammatory screening of both ethyl acetate and butanol fractions, the butanol fraction (85 g) was chosen to be subjected to fractionation by VLC column chromatography. The median lethal dose of 70% ethanol stem bark extract was 6.9 gm/kg b.wt. suggesting its safety. The extract showed a potent antihyperglycemic activity on blood glucose levels in alloxan-induced diabetic rats at a dose of 200 mg/kg b.wt (potencies 0.70 and 0.72 for acute and chronic effect, respectively) compared to metformin at a dose of 150 mg/kg b.wt. The anti-inflammatory activity of the extract showed pronounced activity as it significantly reduced the edema after 4 hrs of administration (potency 0.74) compared to indomethacin at a dose level of 20 mg/kg b.wt. A bioactivity-guided fractionation of the butanol fraction led to isolation of compound P<sub>1</sub> (Gentisic acid), P<sub>2</sub> (Gallic acid) and F (Genistin). The potent antihyperglycemic and anti-inflammatory activities of butanol fraction and their bioactive subfractions could be attributed to high phenolic content.

#### **Biography**

Camilia George Michel has completed her PhD at the age of 32 years from Cairo University benefiting from a Channel System mission with the Institute of Pharmaceutical Biology, Bonn, Germany and postdoctoral studies from Cairo University, Faculty of Pharmacy. She is External Evaluator at the National Authority for Quality Assurance and Accreditation for Education (NAQAAE), the only organization responsible for accrediting Educational Institution in Egypt. She has published more than 20 papers in reputed journals and serving as an editorial board member of repute.

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