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Priliminary phytochemical investigation and pharmacological screening of *Casearia elliptica* bark for anti-diabetic activity

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The metabolic disorder which has become more common in world population is diabetes mellitus. Ample number of formulations of medicines for diabetes is available but still this disorder requires a search for a drug with no or considerably less side effects. This thought gave scope for complementary therapies. A study on bark of *Casearia elliptica* was conducted for evaluation of antidiabetic activity in STZ induced diabetic rats. Rats of body weight 180-200 gms were administered with STZ dose 60 mg/kg body weight to induce diabetes. Five rats were placed in each group. Rats were grouped into Normal group (Group-1), Diabetic control treated with STZ (Group-2), Diabetic rats treated with Glibenclamide (Group-3), Diabetic rats treated with *Casearia elliptica* bark extract (Group-4). Group-3 is administered with 10 mg/kg of standard drug Glibenclamide. The *Casearia elliptica* extract were administered with doses of 200 mg/kg and 400 mg/kg using CMC solution (5%) as the vehicle. Blood glucose in Groups-4, 3, 2, 1 on 14th day was 164.4±1.29, 98.8±1.15, 291±0.71, 107±1.14, respectively. Observation shows that standard is one and half times more potent than Group-4 in hypoglycemic effect at a dose of 200 mg/kg. Body weights of Group-4, 3, 2, 1 and on 14th day were 198.22±1.23, 187.2±0.96, 165.8±1.2, 193.5 ±1.5 and with no toxic effects were observed in the Test Group (Group-4). Body weights and blood glucose levels were compared with Group-2. Proteins, carbohydrates, secondary metabolites like alkaloids, steroids, saponins and flavonoids were present in *Casearia elliptica* which were detected by preliminary chemical tests.

Biography

Chaitanya Sravanthi Kota is currently pursuing her PhD at Jawaharlal Nehru Technological University with the title "Phytochemical Investigation and Pharmacological Screening of Selected Plants for Anti-diabetic Activity and Associated Complications". She is an Associate Professor and Head of Department of Pharmacognosy at Vignan Institute of Pharmaceutical sciences, a Pharmacy educational institute affiliated to Jawaharlal Nehru Technological University. She has presented poster in "5th International conference on Medicinal Plants and Herbal Products" at Manipal in 2013 and in the 66th Indian Pharmaceutical Congress. She has published about 12 articles in international journals and attended conferences both national and international on GLP, Quality Control of Ayurveda Medicine and Agriculture Biotechnology.

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