World Academy of Science, Engineering and Technology
International Journal of Pharmacological and Pharmaceutical Sciences
Vol:11, No:09, 2017

Cedrela Toona Roxb.: An Exploratory Study Describing Its Antidiabetic Property

Authors : Kinjal H. Shah, Piyush M. Patel

Abstract : Diabetes mellitus is considered to be a serious endocrine syndrome. Synthetic hypoglycemic agents can produce serious side effects including hematological effects, coma, and disturbances of the liver and kidney. In addition, they are not suitable for use during pregnancy. In recent years, there have been relatively few reports of short-term side effects or toxicity due to sulphonylureas. Published figures and frequency of side effects in large series of patient range from about 1 to 5%, with symptoms severe enough to lead to the withdrawal of the drug in less than 1 to 2%. Adverse effects, in general, have been of the following type: allergic skin reactions, gastrointestinal disturbances, blood dyscrasias, hepatic dysfunction, and hypoglycemia. The associated disadvantages with insulin and oral hypoglycemic agents have led to stimulation in the research for locating natural resources showing antidiabetic activity and to explore the possibilities of using traditional medicines with proper chemical and pharmacological profiles. Literature survey reveals that the inhabitants of Abbottabad district of Pakistan use the dried leaf powder along with table salt and water orally for treating diabetes, skin allergy, wounds and as a blood purifier, where they pronounced the plant locally as 'Nem.' The detailed phytochemical investigation of the Cedrela toona Roxb. leaves for antidiabetic activity has not been documented. Hence, there is a need for phytochemical investigation of the leaves for antidiabetic activity. The collection of fresh leaves and authentification followed by successive extraction, phytochemical screening, and testing of antidiabetic activity. The blood glucose level was reduced maximum in ethanol extract at 5th and 7th h after treatment. Blood glucose was depressed by 8.2% and 10.06% in alloxan – induced diabetic rats after treatment which was comparable to the standard drug, Glibenclamide. This may be due to the activation of the existing pancreatic cells in diabetic rats by the ethanolic extract.

Keywords : antidiabetic, Cedrela toona Roxb., phytochemical screening, blood glucose
Conference Title : ICPPNP 2017 : International Conference on Pharmacognosy, Phytochemistry and Natural Products
Conference Location : London, United Kingdom
Conference Dates : September 21-22, 2017