ABSTRACT

The present study reveals antidiabetic activity of Madhuca indica & anticonvulsant activity of Vitex negundo. Screening of antidiabetic activity was carried against streptozotocin and streptozotocin-nicotinamide induced diabetic models in Wistar rats. Antiepileptic activity of methanolic extract of vitex negundo leaf was carried out by screening models; maximal electroshock (MES), Pentylentetrazole, Strychnine, Picrotoxin and lithium-pilocarpine induced convulsions in mice & rats.

Diabetes is a chronic metabolic disorder characterized by hyperglycemia and polyuria and this is the leading disease in the world causing morbidity. Many allopathic medicines are available to treat diabetes, but treatment associates with many side effects which were compensated by replacing allopathic medicine with natural drugs. Many natural drugs shown significant antidiabetic activity but all those natural drugs are not commonly available which provoked us to initiate the present study of evaluation of antidiabetic activity of Madhuca indica. Extraction of Madhuca indica bark by using different solvents viz. methanol, Petroleum ether and water. Among these extracts methanolic extract of Madhuca indica has shown significant antidiabetic activity against streptozotocin and streptozotocin – nicotinamide induced diabetic models in wistar rats.

Antiepileptic activity of methanolic extract of vitex negundo leaf against maximal electroshock (MES), Pentylentetrazole, Strychnine, Picrotoxin and lithium-pilocarpine induced convulsions in mice & rats. The extract protected animals against MES induced convulsions and showed potentiating effect against different chemical induced convulsions against standard drugs. Methanolic extract of vitex.negundo may be interfering with inhibiting Na' Channels and interfering with gabanergic mechanism is due to the presence of glycosides & flavanoids attributed to their activity in a dose dependant manner. Screening results indicate methanolic
extract of *vitex negundo* may be showing possible efficacy potential in the treatment of epilepsy. Agnuside isolated from *vitex negundo* leaf extract, the percentage of the drug present in the isolated product were found to be 98.35. Formulation of the agnuside were carried out and the release profile of the drug were carried out by dissolution studies. The stability studies of the formulated product were carried out by taking formulation F3. The similar and dissimilar ratios of the formulated product were carried and found to be within the limits with standard drug Phenytoin.