OBJECTIVES OF THE PRESENT WORK

- Though different types of oral hypoglycemic agents are available along with insulin for the treatment of diabetes mellitus, there is a growing interest in herbal remedies, due to the side effects associated with these therapeutic agents. Because of their perceived effectiveness, minimal side effects in clinical experience and relatively low costs, herbal drugs are prescribed widely even when their biologically active compounds are unknown.

- Currently there are 150 million diabetics worldwide and this number is likely to increase to 300 million are more by the year 2025 due to increase in sedentary life time, consumption of rich energy diet, obesity. While management of diabetes mellitus (DM) includes diet, exercise, oral hypoglycemic agents, and insulin, this treatment do not effectively prevent the complications of diabetes like neuropathy, nephropathy, cataract and hypertension. Therefore, it has become necessary to look for an economical as well as therapeutically effective treatment for usage in developing and undeveloped countries. India is endowed with traditional medicine as is evident from fact that the shushruta samhita differentiated between genetically and the acquired forms of diabetes and recommended different treatments for the two types of diabetes.

- More than 1200 plants species have been found to exhibit antidiabetic properties. In fact, world ethno botanical, information about medicinal plants reports that almost 800 plants are used in the control of diabetes mellitus, although a few of them have been scientifically studied. Ethnobotanical information indicates that more than 100 plants used have traditional remedies for the treatment of diabetes.

- Nature serves as a good source of many medicinal plants. A large no of medicinal plants are available for the treatment of Epilepsy. Epilepsy is becoming the most serious brain disorder and affects about 40 million people and about 100 million will be affected at some time in their life. Overall it accounts for 1% of the world’s burden of diseases, and the prevalence rate is reported at 2%. In addition, the incidence rate for primary generalized tonic – clonic and absence seizures is highest in infants and children.
Madhuca indica belonging to the family Sapotaceae is an important economic tree growing throughout India. Traditionally it has been used against diabetes, rheumatism, ulcers, bleeding and tonsilitis. Flowers are used to make syrup for medicinal purposes. The flowers of Mahuwa tree are fomented to produce an alcoholic drink called Mahuwa, country liquor. Mahua oil is used in medicine as emoliment, cure of skin diseases, rheumatism, headache, laxative, in piles and hemorrhoids.

Vitex negundo have been widely used for the treatment of large number of human ailments. The leaves, bark and aerial parts of the plant are having the active medicinal pharmacological properties. Foklare and traditional uses of the plant includes antifungal activity, laxative activity, anti-inflammatory activity, anticonvulsant activity, anxiolytic activity, anti-oxidant activity, hepatoprotective activity, analgesic activity, anti-asthmatic activity, anti-snake venom activity.

Previous phytochemical studies on Madhuca indica included characterization of sapogenins, triterpenoids, steroids, saponins, flavanoids and glycosides. Vitex negundo is rich in flavones, sugars, acids, terpenes, negunsoside, agunoside.

The increased interest in plant derived drugs is mainly because of the widespread belief that herbal medicine is safer than costly synthetic drugs which possess side effects. Hence, there is need to screen medicinal plants for promising biological activity.

The purpose of this study is to investigate and evaluate antidiabetic activity of Madhuca indica bark extract and anticonvulsant activity of the of Vitex negundo leaf extract.