REVIEW OF LITERATURE

Ananda prabu et al., 7 (2011) reported effect of Biophytum sensitivum on Streptozotocin and Nicotinamide induced diabetic rats. Leaf extract reduced blood glucose and glycosylated hemoglobin levels, increased total haemoglobin, plasma insulin and liver glycogen levels in diabetic rats. It also increased hexokinase activity and decreased glucose-6-phosphate, fructose 1, 6-biphosphate activities in diabetic rats.

Leila etemad et al., 8 (2011) reported investigation of Hypericum perforatum extract on convulsion induced by Picrotoxin in mice. At a dose of 25, 50,100 & 200 mg/kg i.p After 20 minutes animals received Picrotoxin 10mg/kg for induction of seizure, latency of seizure, duration of seizure, death latency and % mortality were determined. The latency of seizure increased in pretreated group with dose of 50 mg/kg.

Sakthi Priyadarsini et al., 9 (2010) reported In vitro and In vivo antidiabetic activity of the leaves of Ranvenala madagascariensis Sonn. On alloxan induced diabetic rats. The ethanolic extract was more effective in reducing blood glucose levels during acute and prolonged treatment.

Bum et al., 10 (2010) reported Anticonvulsant and sedative activity of leaves of Senna Spectabilis in mice. Animal models of epilepsy maximal electroshock (MES), N-Methyl-D-Aspartate (NMDA), Pentylentetrazole (PTZ) and Strychnine (STR) induced convulsions or turning behavior and insomnia (diazepam-induced sleep) were used. The ethanolic extract of leaves of senna-spectabilis strongly increased the total sleep time induced by diazepam, it also protected mice against maximal electroshock (MES), N-Methyl-D-Aspartate (NMDA), Pentylenetetrazole (PTZ) and Strychnine (STR) induced seizures and turning behavior.

Jia et al., 11 (2009) reported Hypoglycemic activity of polyphenolic oligomer-rich extract of cinnamomum parthenoxylon bark in normal and Streptozotocin-induced diabetic c rats. In STZ-induced diabetic c rats after the administration of the extract at doses of 100,200 and 300 mg/kg body wt.over 14 days, the blood glucose levels were decreased by 11.1%,22.5% and 38.7%
respectively, and the plasma insulin levels were significantly increased over pre-treatment levels. In an oral glucose tolerance test, the extract produced a significant decrease in glycemia 90 min after the glucose pulse.

**Karunakar Hegde et al.,** 12 (2009) reported the Anticonvulsant activity of *Carissa cranadas* root extract in experimental mice. The extract reduced the duration of seizures induced by maximal electroshock and protected from Pentylenetetrazole induced tonic seizures and significantly delayed the onset of tonic seizures produced by Picrotoxin and N-methyl-dl-aspartic acid.

**Adolfo Andrade-Cetto et al.,** 13 (2008) reported chronic hypoglycemic effect of *Malmea depressa* root on n5-streptozotocin diabetic rats. Experimental results reveal single administration of the extract at a dose of 50 mg/kg stimulates insulin release, which is similar to the result seen with Tolbutamide administration.

**Ayesha Noori et al.,** 14 (2008) reported antidiabetic activity of *Aloe Vera* and histology of organs in Streptozotocin induced diabetic rats. Results reveal fasting plasma glucose was reduced to normal and pathophysiology of liver and intestine was noticed.

**Wadkar et al.,** 15 (2008) reported Anti-diabetic potential and Indian medicinal plants despite considerable progress in the treatment of diabetes by oral hypoglycemic agents search for newer drugs continue because the existing synthetic drugs have several limitations.

**Sevugan Arumugam et al.,** 16 (2007) reported antidiabetic activity of leaf and callus extracts of *Aegle marmelos* in rabbit. Treatment using extracts from both leaf and callus produced significant decrease in blood sugar levels in Streptozotocin induced diabetes.

**Abdulrahman et al.,** 17 (2007) reported evaluation of the effects of the aqueous extract of vitex *doniana root* bark on the peripheral and central nervous system of laboratory animals. The aqueous extract protected 80% protection of rats treated with convulsive dose of PTZ, while it conferred 100% protection on rats treated with convulsive dose of strychnine.

**Yaro A.H et al.,** 18 (2007) reported Anticonvulsant activities of methanolic extract of *chrysanthellium indicum* Linn in mice and chicks. The extract protected animals against
maximum electroshock-induced convulsion by 80% and significantly reduced the mean recovery
time from convulsion. The extract had a weak anticonvulsant activity against Pentylenetetrazole-
induced convulsion and did not protect mice against strychnine-induced convulsions.

Nigel Irwina et al., 19 (2006) reported evaluation of the antidiabetic activity of DPP IV resistant
N-terminally modified versus mid-chain acylated analogues of glucose-dependant insulinotropic polypeptide. The metabolic and insulin secretory responses to native glucose-dependant insulinotropic polypeptide were also enhancing in 14-day analogue treated mice, revealing no evidence of GIP-receptor densitization.

Sebastian P et al., 20 (2006) reported central nervous system depressant action of flavanoid glycosides. Glycosides 2S-neohesperidin,2S-naringin,diosmin,gossipyn rutin exerted a depressant action on the CNS of mice. Behavioural actions were measured, thiopental induced sleeping time and locomotor activity tests were unlikely to involve a direct action on gamma-amino butyric acid type.

Sabu et al., 21 (2004) reported Antidiabetic activity of Aegle Marmelos and its relationship with its antioxidant properties. Reduction in blood sugar could be seen from 6th day after continuous administration of the extract and on 12th day sugar levels were found to be reduced by 54%.

Nagappa et al., 22 (2003) reported Antidiabetic activity of Terminalia catappa linn fruits. Inview of alleged antidiabetic potential, effect of the petroleum ether, methanol and aqueous extracts of Terminalia catappa fruit on fasting blood sugar levels and serum biochemical analysis in alloxan-induced diabetic rats were investigated. All the three extracts showed antidiabetic activity at dose level 1/5 of their lethal doses.

Ogbonnia et al., 23 (2003) reported Anticonvulsant activity of Schumanniophyton Magnificium root extracts in mice. Ethanolic extract were studied in mice using Picrotoxin and strychnine. At a dose of 800 mg/kg of the extract administered 30 minutes before subcutaneous administration of strychnine prolonged the latency period of the induced seizures and increased the time of death.
Gupta et al., 24 (2003) reported effect of Centella asiatica on Pentylenetetrazole-induced killing cognition and oxidative stress in rats. A dose of 300mg/kg orally decreased the PTZ-kindled seizures and showed improvement in the learning deficit induced by PTZ kindling as evidenced by decrease seizure score and increase latencies in passive avoidance behavior.

Seetharam et al., 25 (2002) reported Hypoglycemic activity of Abutilon indicum leaf extracts in rats. Alcohol and water extracts of Abutilon indicum leaves 400 mg/kg showed significant hypoglycemic effect in normal rats 4 h after administration.

Hossein Hosseinzadeh et al., 26 (2002) reported Anticonvulsant effects of aqueous and ethanolic extracts of Crocus sativus stigmas in mice. The extract delayed the onset of tonic convulsions, but failed to produce complete protection against mortality.

Shirish.D et al., 27 (2002) reported Anticonvulsant activity of roots and rhizomes of Glycyrrhiza glabra. The ethanolic extract of G.glabra did not reduce the duration of tonic hind limb extension in the MES test. However, the extract significantly and dose-dependently delayed the onset of clonic convulsions induced by pentylenetrazol.

Som Nath singh et al., 28 (2001) reported effect of an antidiabetic extract of Catharanthus roseus on enzymic activities in Streptozotocin induced diabetic rats. Results reveal enzymic activities of glycogen synthase; glucose-6-phosphate-dehydrogenase, succinate dehydrogenase and malate dehydrogenase were decreased in liver of diabetic animals in comparison to normal and were significantly improved after treatment with extract at dose 500 mg/kg for 7days.

Adolfo Andrade cetto et al., 29 (2000) reported Hypoglycemic effect of Equisetum myriochaetum aerial parts on Streptozotocin diabetic rats. Butanolic extract at dose of 7 and 13 mg/kg body weight lowered the plasma glucose levels in diabetic rats after three hours of the administration.

Bolwig Tom et al., 30 (1999) reported electroconvulsive therapy as an anticonvulsant: A possible role of neuropeptide (NPY). Neuropeptide transmission is increased by repeated electroconvulsive shock and NPY has been found to inhibit glutamate mediated synaptic
transmission in the rat hippocampus. NPY exerts a seizure-suppressing activity of NPY after kainic acid injection. This peptide may be involved in the seizure threshold increase in humans.