In recent years, ethno-botanical and traditional uses of natural compounds, especially of plant origin received much attention as they were well tested for their efficacy and generally believed to be safe for human use.

The present study was conducted in albino rats of either sex weighing 120-200 g. The study showed the antidiabetic activity of the alcoholic extract of *P. marsupium* against alloxan induced diabetic rats.

Hyperlipidemia is one of the commonest complications of diabetes mellitus and it predisposes them to premature atherosclerosis and macrovascular complications. Common lipid abnormalities in diabetes are raised triglyceride and LDL cholesterol and low HDL levels. In the present study, we had observed a decrease in LDL without any change in HDL. However, our extract showed a decrease in cholesterol and triglyceride level which suggests that a glycaemic control can definitely prevent the development and progression of lipid abnormalities among patients with diabetes mellitus.

The insulin treated group was effective in gaining body weight.

The ethyl acetate and petroleum ether extract was effective in lowering blood glucose and improving the lipid profile.

This study also showed a decrease in the liver glycogen content which indicated that *P. marsupium* extract may not have toxic effect on the liver at the employed dose and
should be encouraged in the management of diabetes mellitus. Estimation of liver
glycogen is also a good marker for assessing hypoglycemic control.

- This study also demonstrated a decrease in urea, uric acid and creatinine levels
  which revealed that the employed dose of the extract is non toxic to kidney.

- *P. marsupium* demonstrated an effective antimicrobial efficacy against both Gram
  positive and negative organisms tested in the present study. The plant also revealed
  the presence of possessing good antioxidant property.

**SCOPE FOR FUTURE STUDIES**

The research for alternate remedies from plant resources for diabetes mellitus will continue
all over the world as the disease possess many challenges not only to the physician but also
to the researchers.

The scope for future study is to conduct pharmacological studies in experimental animal
models and clinical trials to understand and evaluate the exact molecular mechanism of
action of the components present in *P. marsupium* and also in search of a novel molecule
from it. We could also extend the present study to evaluate the circulating insulin levels and
histopathological changes seen in organs/tissues.