OBJECTIVES AND PLAN OF WORK

Globally, it can be seen that instead of inventing and developing the synthetic medicines, mankind is now exploring the plants for their medicinal values. This new trend is developed due to the enough, extensive experimental modification and testing performed on various chemical moieties. The result of such experimentation leads to evolution of new potent medicines.

From ancient time, Ayurvedic system of medicine is popular in India. Ayurveda is holistic system of medicine from India that uses a constitutional model. Its aim is to provide guidance regarding food and lifestyle so that people can stay healthy and folks with health challenges can improve their health. People have been using various parts of different plants as the useful remedies. They have been following Sushruta, Charak and Veda etc. for the preparation of various drugs. Thus the demand for the plant derived drugs. It is true that, for acute ailment there is no crude drug to offer an equivalent alternative to chemically defined drugs. However with no harmful side effects plant preparations are often considered useful for the treatment of less serious diseases, for the supportive treatment of chronic diseases, for the treatment over long periods of time and possibly for prophylactic medication. Thus medicinal plants continue to receive attention of scientist for their chemical and pharmacological investigation in India and abroad. Beside these, the studies on folk medicines through ethnobotanical surveys are gaining importance in present researchers as these reveal new biodynamic compounds of therapeutic value.

Herbal medicines are becoming more and more popular now a days. Among the entire flora 35000 to 70000 species have been used for medicinal purpose. In recent years, focus on plant research has increased all over the world and evidence show immense potential of medicinal plants used in various traditional systems. All the successful research was totally based on the claims of traditional healers or by the tribal peoples. In India of the 17000 species of higher plants, 7500 are known for medicinal uses. This is the higher proportion of medicinal plants known for their medical purposes in any country of the world for the existing flora of that respective country. Main aim of study of *Pterospermum acerifolium* was to find out medicinal values through study of phytochemical and pharmacological actions. *Pterospermum*
acerifolium is mentioned in ayurvedic literature and describe as tonic, anticephalagic, anti-inflammatory, haemostatic, antileprotic, and antiseptic property. Pharmacognosy is vital link between Ayurvedic and Allopathic system of medicine. It provides a system where in, the active principles of crude drugs derived from natural origin, could be dispensed, formulated and manufactured in dosage forms acceptable to Allopathic system of Medicine. Literature survey revealed that scanty work carried out on the various part of Pterospermum acerifolium. Also presence of potential phytoconstituents in most of the species of Sterculiaceae family suggested probable potential in the Pterospermum acerifolium. Thus, this dissertation work was aimed at Pharmacognostic, phytochemical and pharmacological investigations of Pterospermum acerifolium with the objective of isolation, purification, identification of potential lead molecule and then pharmacological screening.

- Pharmacognostic studies.
- Isolation and purification of phytoconstituents.
- Characterization of the isolated constituents qualitatively and quantitatively using advanced analytical techniques like UV, $^1$H and $^{13}$C NMR, GC-MS, and HPTLC
- Quantification of phytoconstituents by HPTLC
- To study the pharmacological activities.