3.0 RESEARCH ENVISAGED

3.1 AIM OF PRESENT STUDY

Medicinal plants have been in India for centuries as an important therapeutic source for treating wide variety of diseases and have been found to be of immense global importance. Helminthiasis is caused by helminthic parasites, which are the major problem in both human and animals. These parasites are classified as Platyhelminths (Cestodes & Trematodes) and Nematohelminths (Nematodes) which causes severe problems such as gastrointestinal disturbances, blood loss, nutritional deficiencies and other manifestations. More number of natural drugs are used as anthelmintics in indigenous medicine.

Even now, number of herbal formulations are found to be effective anthelmintics for human. The imperative necessity to the search for the standard and safe anthelmintic agent cannot be over emphasized. From the time immemorial, a large number of herbal drugs are in use for anthelmintic activity.

Hence, the present work was undertaken to validate scientifically the five plants viz. *Dalbergia sissoo* (Roxb.) - heart wood; *Cassia fistula* (Linn) - whole Plant, *Clitoria ternatea* (Linn), *Cissus quadrangularis* (Linn) and *Amorphophyllus campanulatus* for anthelmintic activity since an ideal herbal drug for the treatment of helminthiasis has not emerged till date.
3.2 PLAN OF WORK

The following is the plan of work proposed to scientifically validate the above five plants and their anthelmintic activity.

- An extensive literature survey carried out to have the updated information about the plants.
- Collection of the plants and authentication of the same.
- Preparation of extracts by using solvents of increasing polarity viz. hexane, petroleum ether, chloroform, acetone, ethanol and water.
- Preliminary phytochemical studies to find out the presence of phytoconstituents.
- Thin layer chromatographic studies for prepared extracts.
- Column chromatographic studies to isolate the active constituents from various extracts.
- Spectral studies to confirm the isolated active components.
- Toxicological studies to evaluate the pharmacological effect.
- Screening the extracts for anthelmintic activity on models
- Formulation and standardization of polyherbal dosage form.
- Standardization of polyherbal extract with marketing product.
- Antimicrobial studies.
- The observed results are discussed with statistical analysis and photographic evidences.