3. AIM OF THE PRESENT WORK:

Taking into consideration some of the lacunae mentioned in chapter 2.11, it was thought worth to study:

1. The detail microscopical characters of certain parts of the drugs which have not been reported as yet.
2. The antihepatotoxic activity of some of the unexplored isolates of a drug which have not been studied. For this Solanum nigrum was selected. This plant is reputed for its hepatoprotective properties but its active chemical constituents responsible for these properties have not been explored so far. Probably because of its solasodine content it may be active because other herbs containing solasodine are reported to possess this activity.
3. Herbal formulations incorporating four potent hepatoprotective drugs - Andrographis paniculata (Acanthaceae), Eclipta alba (Asteraceae), Phyllanthus amarus (Euphorbiaceae) and Solanum nigrum were also thought worth to investigate for their quality by estimating their active principles.

The present project deals with the following study:

1. To study the detail microscopy of various parts of the four antihepatotoxic drugs, Andrographis paniculata, Eclipta alba, Phyllanthus amarus and Solanum nigrum and their verification with the published literature.
2. Detecting the authenticity of fresh and dried (market) samples of above four antihepatotoxic drugs by morphological, microscopical and chemical evaluations.
3. Confirming the quality of above drugs by isolating their reported active hepatoprotective principles, and subjecting them to various techniques like U.V. spectroscopy, I.R. spectroscopy, T.L.C. etc.
4. Isolation of the various compounds of the leaves of Solanum nigrum by column chromatography and confirming their identity by various techniques like T.L.C., U.V., etc.
5. Confirming the hepatoprotective activity by pharmacological screening of certain isolated compounds of leaves of S. nigrum.
6. Detecting the quality of patent and proprietary polyherbal formulations available in the local market by estimating their certain potent active hepatoprotective principles.

• The promising aspect of the project:

The project would be helpful for detecting the identity and quality of the hepatoprotective drugs and their formulations to,

(1) Shopkeepers who purchase the drugs from the tribal people.
(2) Persons who deal with export-import of authenticated herbal drugs.
(3) Persons who manufacture Ayurvedic drugs formulations and
(4) Persons who are engaged in Drug testing laboratories.