CHAPTER-4

PLAN OF WORK

PHYTOCHEMICAL AND PHARMACOLOGICAL INVESTIGATION OF ANTI-TUBERCULAR ACTIVITY OF CERTAIN INDIGENOUS PLANTS

PLAN OF WORK :-

Phase 1 –

• Selection of the plant on the basis of literature survey & folklore.
• Collection of plant.
• Authentication of selected plant.
• Preparation of various extracts by using different solvents like water, pet. ether, methanol, acetone, ethanol etc.

Phase 2 - In-vitro study –

• Procurement of standard pure culture media of *Mycobacterium tuberculosis*.
• Cultivation of *Mycobacterium tuberculosis* by using solid media.

Phase 3 –

• Phytochemical investigation of all different extracts of both the plants *Ricinus communis* Linn. and *Vitex negundo* Linn.
• Evaluation of anti-tubercular activity of all different extracts of both the plants *Ricinus communis* Linn. and *Vitex negundo* Linn.

Phase 4 –

• Isolation of phytoconstituents of active anti-tubercular extracts of both the plants *Ricinus communis* Linn. and *Vitex negundo* Linn. by column chromatography.

Phase 5 –

• Evaluation of anti-tubercular activity of phytoconstituents in different concentrations by sensitivity testing of *Mycobacterium tuberculosis*.

Phase 6 –

• Structural elucidation of active anti-TB phytoconstituents by UV or I. R., Mass and NMR spectra.
• Development of new analytical method of extract and / or active chemical constituent.