Aims & Objectives

Medicinal plants have become the focus of intense study recently in terms of conservation and as to whether their traditional uses are supported by actual pharmacological effects or merely based on folklore. Review of literature revealed that *Dalbergia sissoo* Roxb., *Citrus limon* Linn. and *Elaeocarpus sphaericus* are highly reputed plants, and have been widely employed in herbal medicines but no significant work has been conducted on the anxiolytic effect of the plant bark extracts. Hence, the present study was aimed at evaluation of anxiolytic effect of bark extracts of selected plants (*Dalbergia sissoo* Roxb., *Citrus limon* Linn. and *Elaeocarpus sphaericus*) by using the EPM and LDT models in experimental animals then isolate and characterize the bioactive compound/compounds from the most active plant bark extract.

The study focuses mainly on the following objectives:

- Collection and identification of plant materials.
- Extraction of dried stems bark of *Dalbergia sissoo* Roxb, *Citrus limon* Linn. and *Elaeocarpus sphaericus* with different extracting solvents of varying degrees of polarity to determine best extractant.
- Evaluation of the anxiolytic activity of the all extracts of selected plants with EPM model and to identify the one with highest activity plant extract.
- Isolation of anxiolytic compounds from the identified plant extract with maximum anxiolytic activity by applying column chromatographic Techniques.
- Characterization and elucidate the structure of the isolated compounds using UV, IR, NMR spectroscopy and Mass spectrometry.
- Evaluate anxiolytic activity of the isolated compound with battery of anxiolytic models.
- Neurotransmitter study of mice brain for isolated compound with maximum anxiolytic activity.
Plan of Work

Pharmacognostic Evaluation

Preliminary Phytochemical Screening of Extracts

Elevated Plus Maze (EPM)

Light-Dark Test (LDT)

Acute toxicity test

ANXIOLYTIC ACTIVITY

BIOASSAY GUIDED FRACTIONATION

ANXIOLYTIC N ACTIVITY

ISOLATED COMPOUNDS

SEDATION EFFECT

Neurotransmitters estimation

Structure Elucidation

UV, FTIR, Mass, NMR

Dalbergia sissoo Roxb., Citrus limon Linn., Elaeocarpus sphaericus