

## CHAPTER - II

### 2.1 Aims and Objectives

The aim of this research work is to evaluate the antistress and anti oxidant activity in *Aplotaxis auriculata* rhizome extract. We suspect that the rhizome extract has the ability to enhance the anti oxidant levels, restore the bio chemical parameters and reduce stress. This work is highly useful to the society to prevent the stress related disorders. Regular supplementation of the rhizome helps to reduce the symptoms of disease and increase the quality of life.

The following are the main objectives of the present study.

- To qualitatively and quantitatively analyse the phytochemicals in *Aplotaxis auriculata* rhizome extract (AARE).
- To analyse the inorganic elements in AARE
- To identify the compounds and their absorption bands using UV-Visible Spectra.
- To identify the functional groups in AARE using FT-IR.
- To determine the bioactive compounds from AARE using GCMS.
- To analyse the flavonoid compounds in AARE using HPLC.
- To assess the *in vitro* antioxidant activity of AARE.
- To determine the antistress activity of AARE in chemical induced test, swimming endurance test, restraint stress and ulcer stress model.
- To examine the stress markers.
- To analyse the enzymatic and non-enzymatic antioxidant in tissues and serum.
- To monitor the stress hormones.
- To analyse the neurotransmitters.
- To examine the histopathological changes in brain and adrenal gland.
- *Insilico* screening for antistress activity.