CHAPTER 3

OBJECTIVES AND PLAN OF WORK

To combat the noxious stressful situation of life and stress response of the body, we need efficient antistress agent. Since the herbal medicines are potential and efficient source for treatment of diseases, its exploration as antistress agent is prerequisite to overcome stress. So the present work was planned with the following objectives.

1. Selection of the medicinal plant: while reviewing the reported pharmacological activities and clinical uses in Ayurveda for *Vitis vinifera* and *Cichorium intybus*, it was found that several diseases are postulated to be induced by stress. Since both the plants have not explored as antistress agent to a significant extent, and on the background of available information of plant chemotaxonomic condition with traditional ethno medical information the present work was planned with the following aim:

   Evaluation of antistress activity of *Vitis vinifera* and *Cichorium intybus* in albino rats and albino mice.

2. Collection of plant material and its authentication.

3. Preparation of plant extract.

4. Preliminary phytochemical investigation of extract.

5. Determination of acute toxicity of plants.

6. Evaluation of antistress activity by different models.

3.1 PLAN OF WORK: The present work was planned in different phases to carryout following tasks:

**Phase-I**: Literature survey was done to establish concept of stress and antistress agent based on scientific publication.

**Phase-II**: *Vitis vinifera* and *Cichorium intybus* was collected and then authenticated.

**Phase-III**: Extraction from *Vitis vinifera* seed and *Cichorium intybus* root.

**Phase-IV**: Preliminary phytochemical screening of extracts was carried out as per established methods.

**Phase-V**: Acute toxicity of *Vitis vinifera* seed and *Cichorium intybus* root extracts was determined to establish safety of the plants.

**Phase-VI**: Evaluation of antistress activity of *Vitis vinifera* seed and *Cichorium intybus* root extracts was done, using different stress model in the following way:
• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on swimming endurance of albino mice.

• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on drug induced narcosis in albino mice.

• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on cold and restraint stress induced brain lipid peroxidation.

• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on swimming stress induced gastric ulceration in rats.

• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on adrenocortical activity in stress induced rats.

• Effect of *Vitis vinifera* seeds and *Cichorium intybus* roots extracts on liver glycogen of albino rats during weight loaded forced swimming stress.

• Effect of extracts of *Vitis vinifera* and *Cichorium intybus* as Immunomodulatory during stress and drug induced myelosuppression in albino rats.