Aim & Objectives
In the practice of modern medicine, it is recognized that high blood pressure, atherosclerosis, easy blood clotting and heart enlargement can lead to catastrophic events such as heart attack and stroke, which are the principle causes of death in persons over 40 years of age. As a result, millions of adults are taking one or more of the drugs to lower blood pressure, cholesterol, and/or to reduce platelet aggregation.

A review on the prophylactic and therapeutic effect of many plant foods and extracts in reducing cardiovascular diseases revealed that they are relatively safe, easily procurable and affordable. Besides natural products has been the source for the discovery of many modern drugs. This led to chemical and biological screening programs for natural products all over the world. Presently an increased usage of plants as medicine is observed among the medical fraternity in the management of various illnesses and sufferings of the patients and to obviate the profound side effects encountered in the usage of modern drugs.

Phytomedicine safely interact with free radicals and terminate the chain reaction before vital molecules are damaged. The world health organization (WHO) has also recommended the scientific evaluation of the effectiveness of plants in conditions where there is lack of safe synthetic drugs. In recent years there has been an explosion of scientific information concerning plants.

Various researches carried out on crude plant extracts and various plant derived substances resulted in the development of many plant based therapeutic agents. Numbers of plants are claimed to possess various therapeutic applications and many researches are focused in these aspects.

Hence in this present dissertation attempts were made to develop a herbal based drug for a life threatening disorder MI. Myocardial infarction (MI), commonly known as heart attack is the leading cause of death for both men and women all over the world. It is a common presentation of ischemic heart disease. Ischemic heart
Aim & Objectives

disease is the leading cause of death in developed countries, but third to AIDS and lower respiratory infections in developing countries.

A botanical survey was conducted in and around Tiruchirappalli and a common tree *Muntingia calabura* L. belonging to the family Elaeocarpaceae popularly known for its proven hypotensive, antiseptic and antispasmodic properties was selected to study its effect in the maintenance of myocardial integrity on Isoproterenol induced MI.

The main objective of the study is:

- To evaluate scientifically the cardio protective potentials of a herbal drug source - *Muntingia calabura* L.
- To carry out Atomic Absorption Spectroscopic analysis and GC-MS studies to determine the probable phytomolecule.
- To conduct in depth pre clinical trials and to develop a safe, efficacious and an eco friendly cardio protective herbal drug
- To derive at a possible mechanism of the cardioprotective action of the selected drug.