2. AIM AND OBJECTIVES

2.1 NEED FOR THE STUDY (AIM)
In an age when synthetic drugs are increasingly unwelcome and worldwide trend towards the utilization of natural plant remedies and developing new drugs from plant products has created an enormous need for information about the properties and uses of the medicinal plants.
In India plenty of plants are used for their medicinal properties. In fact till the date only few plants have been investigated thoroughly while a great number of plants being extensively used in medicines are still not investigated. Resurgence in the use of herbal medicines worldwide has provided an excellent opportunity to us to look for therapeutic leads from our ancient system of Ayurveda that could be utilized for drug development.
Therefore, there is an urgent need to evaluate the therapeutic potential of the drugs as per WHO guidelines. The importance of adequate pharmacognostical, phytochemical and pharmacological evidence of crude drug used in various medicinal systems is becoming increasingly recognized and in this respect the present work will be useful.
From the flora of south Gujarat, Dang forest many plants are used by tribal people to cure the various diseases, but till the date those plants are not scientifically evaluated, among which *Heterophragma adenophyllum* is much promising plants in that area.
The literature survey revealed that despite the popular use of plants, there is no scientific study carried out on their phytochemical, isolation and pharmacological effect. Therefore efforts have been made to scientifically investigate *Heterophragma adenophyllum*. 
2. Aim and Objectives

2.2 OBJECTIVES

To develop traditional or alternative approach to existing medications by complying with WHO guideline.

To standardize plant material by using WHO guideline.

To screen the medicinal plant for Phytochemical and Biological activity.

To estimate secondary metabolites.

Preparation and separation of different fractions.

To characterize the isolated constituents qualitatively and quantitatively using advanced analytical techniques.
2. Aim and Objectives

2.3 PLAN OF WORK

2.3.1 Literature survey

2.3.2 Pharmacognostic study
   2.3.2.1 Macroscopy
   2.3.2.1 Microscopy

2.3.3 Standardization of powder
   2.3.3.1 Determination of ash value
   2.3.3.2 Determination of extractive values
   2.3.3.3 Determination of moisture content (LOD)
   2.3.3.4 Fluorescence analysis

2.3.4 Phytochemical analysis
   2.3.4.1 Successive extraction of plant material
   2.3.4.2 Preliminary phytochemical investigation
   2.3.4.3 Chromatographic profile of extract by using TLC fingerprinting
   2.3.4.4 Separation and isolation of phytoconstituents
   2.3.4.5 Physical data and spectral characterization of isolated phytoconstituents

2.3.5 Biological screening
   2.3.5.1 Antioxidant activity
   2.3.5.2 Antimicrobial activity
   2.3.5.3 Antihypertensive activity
2.4 OBJECTIVE OF THE STUDY

The objectives of this study are focused on standardization of drug, isolation and characterization of compounds, bioactivities of extract. To accomplish these objectives, various chromatographic techniques such as thin layer chromatography (TLC), column chromatography, Gas chromatography-mass spectroscopy (GC-MS) were used to identify, isolate and purify the compounds. Also, spectroscopic methods such as nuclear magnetic resonance (NMR), Ultraviolet (UV), Infrared (IR) and Mass spectroscopy used to characterize the isolated compounds. Antihypertensive, antioxidant and antimicrobial assays were performed.