INTRODUCTION

Man requires basic necessities i.e. food, shelter and cloth, in addition to this to cure different ailments the ethnic people were in search of curative agents. The time immemorial ethnic people have the valuable indigenous knowledge about plants which is an important Indian heritage. The rustics are good at knowledge of herbal wealth and related vegetation in the immediate vicinity. The rural communities have staunch confidence in ethnomedicine.

The use of the plants as medicine has been followed traditionally as trial and error and the effect of the plant medicine is being passed from generation to generation. But the use of the plants for medicine has not been recorded. It is orally familiar to the rustics.

Plant medicines are alternating choice to modern synthetic drugs, having minimum side effects and are supposed to be safe. They use the plant parts in the form paste, juice, decoction, powder; infusion etc. used to cure various diseases. However, the present medicinal methods do not agree the potential of phytomedicine unless this wisdom is experimentally assessed.

India is considered as botanical garden of the world. People have adopted the ancient diseases curative systems like Ayurveda, Siddha and Unani to avoid adverse side effects of synthetic drugs. The herbal formulations were used by the herbal medicinal practitioners without knowing the plant compounds and these practices were continued generation to generations without documentation. Therefore, to know the potential of a plant crude drug the phytochemical assessment is very essential.

The standardization of natural product is an integral part of pharmacology. It can be done through pharmacognosy. Pharmacognosy is a simple and reliable tool, by which complete information of the crude drug can be obtained. It helps in identification and authentication of the plant material and quality of herbal medicine.

Curative properties of medicinal plants are mainly due to the presence of various chemical compounds i.e. secondary metabolites like alkaloids, glycosides, flavanoids, saponins, tannins, carbohydrates and essential oils etc.

The use of plants as source of remedies for the treatment of many diseases dated back to prehistory and people have this old tradition. The search for agent to
cure infectious diseases began long before people were aware of existence of microbes. Infectious diseases caused by bacteria, fungi, viruses and parasites are still a major threat to public health despite the tremendous progress in human medicine.

The search for new plant based natural products is on the basis of their ethno medicinal uses. In the present study during ethno botanical survey, it was noticed that the rustics were using wild members of Cucurbitaceae as medicine and vegetable.

In India, the family Cucurbitaceae is represented by 130 genera and 800 species. Cucurbitaceae is a major family among economically important domesticated species particularly those with edible fruits including cucumber (Cucumis sativus), melon (Cucumis melo), water melon (Citrullus lanatus), Squash and pumpkin (Cucurbita spp), bitter melon (Momordica charantia), bottle gourd (Lagenaria siceraria) and wax gourd (Benincasa hispida). Some of these have medicinal uses.

The family Cucurbitaceous fairly large and is predominantly tropical family. The members are annuals or perennials, herbaceous lianas and also massive woody lianas. It consisting of various, melons and gourds including crops such as cucumbers, pumpkins, luffas and water melons, most of them are lianas, which climb with help of leaf tendrils.

Therefore, it was decided to screen the plant phytochemicals and to assess their antimicrobial efficacy. Taking into consideration the phytomedicinal importance five wild plants were selected for the study. The selected plants are Coccinia grandis, Lagenaria siceraria, Trichosanthes tricuspidata, Diplocyclos palmatus and Cucumis setosus which are wild as well as bitter in taste.

**Objective of the study:**
i) Collections of plants   ii) Phamacognostic study   iii) phytochemical screening
iv) Thin layer chromatography   v) High performance liquid chromatography
vi) Antimicrobial assay of selected plants.
Organization of thesis:
The thesis comprises 14 chapters:

Chapter 1 Introduction: It provides the general information of medicinal plants and selection of cucurbitaceous plants for the study.

Chapter 2 Review of literature: It represents earlier work done in this regards.

Chapter 3 Materials and methods: This chapter presents the methods adopted for anatomical study of selected plants, quantitative analysis of plant parts, antimicrobial assays of tested bacteria and fungi, phytochemical and physico-chemical analysis of selected medicinal plants. Chromatographical technique for isolation and identification of medicinal active ingredients from the crude extracts.

Chapter 4 Morphology and medicinal uses: In this chapter information about selected plants deals with morphology, formulation, the medicinal uses, doses, preparations used to treat different ailments. It is also highlighted with the ethno botanical notes.

Chapter 5 Observations and results: This chapter deals the detail data about observation and results of the study.

Chapter 6 TLC and HPLC: In this chapter methodology, observation, results and discussion about TLC and HPLC is represented.

Chapter 7 Microbiological assays: It represent efficacy of antibacterial and antifungal potential of plants in different solvents against tested microorganism.

Chapter 8: Antioxidant activity: The results and discussion of antioxidant activity of studied plants are represented.

Chapter 9: Powder analysis: In this the microscopical studies and microchemical tests of powered leaf and fruit drug are cited.

Chapter 10 Discussion: In this chapter the findings of work was discussed with earlier reviewed literature.

Chapter 11: Summary and Conclusion: The summary of the investigation and conclusions drawn are cited.

Chapter 12 Prospects of Study: It narrates the future prospects and importance of the study.

Chapter13: Bibliography: The references used in the thesis are cited.

Chapter14: Published Research Papers: The titles of Published Research Papers by the candidate are cited.