Chapter-1

General Introduction
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"God who gives the wound gives the salve"

The words state a literal fact and also hold an inspiring thought which refers to much - to very much - more than our physical needs. Whatever burden is laid upon us - whatever poison infects our lives - whatever pain we are called upon to bear - the power which lightens our burden by adding to our strength, the antidote which robs the poison of its sting, the remedy which cures, or, at least, alleviates our pain, is somewhere at hand and will be found if we look for it a right.

Thinking purely of our bodily needs it will be found that remedies for most of our ills are waiting to our hands in herb garden and plants around us. Herbs, fruits, cereals, vegetables, and variety of other plant parts are the salves which God has sent to heal our ills. It is for us to use them aright since to neglect them is to throw away our greatest treasure - "good health."

Plants have been used for defence, protection and nourishment by human being with the dawn of
civilization. The primitive man used the raw materials and raw extracts of the plants to help those in sorrow, need and sickness without the knowledge of their composition. With the growth of civilization, the multifarious uses of plant products began to be appreciated and in course of time, their usages in different fields has been developed accordingly.

Researches on medicinal plants are proceeding to find out the plants related to those which have already been employed in medicine, to check up the use of folk medicines and to investigate thoroughly the presence of biologically active compounds. As such the plants have been thoroughly investigated throughout the ages and their importance realized either for beauty or utility.

The relationship between man and environment is never static, it is always under constant process of change, but it has, however, not been true in case of tribals. The life, culture and tradition of these people remained static for hundreds of years and often it is said that they are the living archaeo-logical museum of ancient traditions and cultural heritage. The consequent stages of so called technological progress of civilized society have erased against the ancient cultures of these people have now threatened of
extinction. Their rich traditional skills and oral folk-lore knowledge are fast disappearing and are likely to be lost for ever. Hence, this problem must be taken as a challenge by researchers and scientists to conserve the valuable knowledge and wisdom of the tribals for the posterity and human welfare.

The term "Ethnobotany" was applied less than a century ago by a botanist of Pennsylvania University, Jhon W. Harshburger (1895), for the study of the relationships which exist between people of primitive societies (Tribal communities) and their plant environment. The man's life has always been intimately connected with plants around him. There is practically no human activity in which plants do not play any role. Ethnobotany covers the whole gamut of man's activity of farming, hunting, home and social life, food habits, religious beliefs and ceremonies, traditional medicines, entertainments and so on - in all of which can be discussed a strong presence of silvan surroundings. Ethnobotany must have been the first knowledge which the prehistoric man had acquired by sheer necessity, intuition, keen observation and experimentation.
The ethnobotany of medicinal plants is known as "Ethnomedicine." The importance, scope and implications of ethnomedicine have been expanding throughout the world at a very fast rate. The ethnomedicinal studies have shown their relevance in search for new herbal drug for human health.

Present day researches or investigations have been necessitated due to rapid depletion of natural resources on one hand and the dwindling traditional ethnic culture on the other hand.

India has a great and ancient cultural heritage. Medical treatment flourished here centuries ago when people in other parts of the world were not so advanced. There is no dearth of evidence to prove these statements as is shown by the Vedas, Puranas and other subsequent Indian publications. The primitive man used the crude extracts of plants to cure a number of ailments with out the knowledge of their chemical composition.

In India, the diversified culture distributed along a vast area and the old history of rituals and observations related to plant world provide a fruitful ground for ethnobotanical investigations. A number of folk medicines preserved with the tribal and rural
people living in deep virgin forests, offer considerable scope for such studies.

Sagar district of Madhya Pradesh, India, is rich in medicinal plants and is inhabited by various tribes and other people secluded from urbanisation and from impact of modern technological developments provide good scope for ethnomedicinal studies. Only a few preliminary reports on ethnobatanical aspects of this region are available (Saxena & Vyas, 1981; Sahu et. al. 1983; Bhalla et. al. 1982, Sahu 1982, and Dixit 1993). Hence, a survey of localilies of Sagar district, was carried out, for the collection of plants and informations regarding the use of medicinal plants with the help of personal interview with tribal people, old villager's, local inhabitants, vaidya's, indigenous doctors and from the available literature.

It is however, being increasingly, realized that such ethnomedicinal studies would be more meaningful if the data so obtained are subjected to detailed experimental evaluation. Besides drowing the attainment of ethnobotanist, plant biochemists, microbiologists and pharmacologists for various analytical studies, these attempts are also likely to yield more valuable natural durgs.
From literature it is found that the medical value and industrial stimulus has been provided by natural active constituents isolated from plant material used in oriental folk medicine. It is likely that still other substances with more significant and valuable pharmacological properties could be isolated from plants and that, incidently clues to some of there may be found in the folk medicine of premitve man. There are ample proof for the application of crude plant extracts and decoctions in therapy world over as well as in India. But the rationalization of the science of therapeutics as we know is comparatively of recent origin. Chemical investigations alongwith pharmacological examination of the chemical constituents from plants of medicinal value have gained much importance in the therapeutic world. This idea has largely been responsible to take up the phytochemical investigations carried out during the course of present study.

Phytochemistry has not only enriched modern medicine but has also provided valuable lead for drug designing. The medicinal properties of plants depend upon the presence of active principles. The isolation of active principles which possess the physiological and pharmacological activity from the medicinal plants and
their successful utilization to alleviate human suffering have encouraged researchers to continue the investigation for finding out the new drugs from natural sources.

It is being increasingly realized that the antibiotic drugs, of microbial origin, in spite of being extremely valuable cause the growing fear to emergence of resistant strains of pathogenic micro-organism, allergic reactions and many side-effects. Thus importance of natural antimicrobial agents from higher plants is gaining increased recognition from modern scientists. The higher plants now represent the most potentially useful area for newer avenue of approach in the search of more efficacious "antibiotics." As such, with a view to further elucidating the importance of ethnomedicinal plants of Sagar district, in vitro evaluation for their antimicrobial activity was considered desirable.

In view of the above mentioned background the present work, entitled "Ethnomedicinal Phytochemical and Antimicrobial Studies of some Medicinal Plants of Sagar District", was undertaken, in which attention has been focussed mainly on following aspects.

(1) Survey of various localities of Sagar
district for collection of information about the medicinal uses of plants by tribals & local people for treatment of different ailments.

(2) Collection, identification and preservation of important plants.

(3) Phytochemical studies of some selected medicinal plants.

(4) Antimicrobial studies of some selected medicinal plants.