1. INTRODUCTION

Herbal medicines sometimes referred as herbalism or botanical medicine is the use of herbs for their therapeutic or medicinal value. Herbal medicine is the old form of health care known to mankind. Herbs had been used by all cultures throughout history. It was an integral part of the development of modern civilization. Primitive man observed and appreciated the great diversity of plants available to him. The plants provided food, clothing, shelter and medicine. Much of the medicinal use of plants seems to have been developed through observations of wild animals and by trial and error. As time went on, each tribe added the medicinal power of herbs in their area to its knowledge base. They methodically collected information on herbs and developed well defined herbal pharmacopoeia (Wikipedia, the free encyclopedia).

Indeed, well into the 20\textsuperscript{th} century much of the pharmacopoeia of scientific medicine was derived from the herbal lore of native people. Many drugs commonly used today are of herbal origin. Indeed, about 25 percent of the prescription drugs are dispensed in the United States contain at least one active ingredient derived from plant material. Some are made from plant extracts; others are synthesized to mimic a natural plant compound.

In spite of synthetic drugs, herbal drugs have their place in therapy. Their effectiveness, low-cost and comparative freedom from serious toxic effects makes these medicines not only popular but also an acceptable mode of treating diseases even in modern times (Pushpangadan P, 1995). Ephedra used in traditional Chinese
medicine for more than two thousand years to treat asthma and other respiratory problems. Ephedrine, the active ingredient of ephedra, is used in the commercial pharmaceutical preparations for the relief of the symptoms of asthma and other respiratory problems. It helps the patient to breathe easily (Chang M, 1986).

All through the human history, there has been a noticeable concern for health care and the cure of disease, though the concepts themselves took a very long time to develop into a body of knowledge. A logical approach to the study of drugs and their activities is the recognition of the basic principles behind the biochemical events leading to drug actions. Nowadays, an increasing amount of insight into the behavior of drugs at the macromolecular level has been developed and there is a lot of direct and indirect evidence supporting these biochemical postulations of drug action. However, in the so-called pre-scientific period, natural products have a history of therapy in the form of folk remedies, but little of today’s drug therapy is based on these remedies. Some of the natural products currently used, either as such or as derivatives may often be used originally for other purposes, such as arrow poisons, part of religious or other rituals and even cosmetics. Examples of such products include opium, belladonna, cinchona bark, ergot, curare, nutmeg, calabar bean, foxglove and squill. Many drugs originally used as folk medicines, have been abandoned.

The knowledge of anatomy and physiology play an important role in the development of drug therapy, for example *Nux vomica* was first drug administered by Javanese arrow to animals by various routes and resulting convulsions and asphyxia. The spinal cord was removed and sectioned to ascertain the site of action
also for the first time and the compound strychnine was later identified and isolated as the active component. Following the French revolution, science became more empirical and drugs based on logic were discarded (Foye et al., 1995).

Perhaps, the earliest recorded use of a medicinal plant has been mentioned in ‘Rigveda’ and one mentioned in the modern texts is that of the herb called “Ma huang,” a species of Ephedra used medicinally in China for over 5000 years (Foye et al., 1995). Although Ayurveda records the use of herbs for the treatment of diseases in the Vedic era. Drugs of plant origin provide many of the diuretics, emmenagogues, carminatives, rubefacients, dermatologic remedies, expectorants and anthelmentics etc. Several years ago the World Health Organization (WHO) made an attempt to identify all medicinal plants that exist in the world. More than 20,000 species were included in the list. NAPRALERT database documents ethnomedicinal uses alone for 9200 of 33000 species of monocots, dicots, gymnosperms, pteridophytes, bryophytes and lichens, which would suggest that 28% of plants on earth have been used ethnomedicinally (Farnsworth and Soejarto, 1991).

Although drugs of plant origin are still employed for some of these uses, synthetic drugs now constitute the major part of the products used. It must be noted that much of the work on synthetic compounds began when scientists and researchers had isolated active natural compounds and had characterized them. Plants that were indigenous to a particular region were not easily available throughout the year as well as in all other regions of the world. Thus, the development of synthetic compounds and therefore active ingredients was driven
primarily by a need to ensure adequate supply, within standard quality norms. It may be interesting to note that figures from more than 1 billion prescriptions dispensed from pharmacies in the United States during 1967 show that about 243 millions or about 23% of all prescriptions contained one or more products of plant origin.

The products included represented 50 pure compounds and 40 crude or semi purified types of plant extracts; about 50 genera of plants were represented. This percentage of drugs has not changed even today. Plant drugs therefore continue to constitute an important part of the medicines used even today especially in the grey areas of modern medicine where there is little or no therapy like the ones used for the immunomodulators used in our traditional systems of medicine viz. Ayurveda, Siddha and Unani.

In Ayurveda, groups of plant known as Rasayanas have been extensively used as rejuvenators for arresting the process of aging, to provide resistance against disease including those induced by emotional perturbation and to promote general well-being of the individual. It is, thus, obvious that long before the concept of adaptogen was involved in the middle part of this century, a remarkably similar theory has been propounded centuries ago in Ayurveda.