

INTRODUCTION

The use of plants, as medicine has very close association with the evolution of human civilisation. From the earliest time man used plants to relieve sufferings of mankind. Primitive people or tribal people in all ages have had some knowledge of some medicinal plants, perhaps, as a result of trial and error. Possibly man might have learnt it as an accidental discovery or from animals. For instance the animals such as cats and dogs are known to eat grass just to correct their gastro-intestinal problems.

In the literature the use of medicinal plant goes back to scrips in India and similarly in the writings of Egyptians unani and China before Christian era. As it is known in India, methodic way of using of medicinal plants for their therapuetic value is written in Ayurveda which owes, it's origin to Charka and Sushrata. Similarly in Greces prior to Christian era the Greeks have contributed to large extent, use of plants as medicine. Hippocrates (477 BC) is a well known physician to whom todays' medical world owes. In fact before one is allowed to practice medicine, he has to take oath which is known as Hippocrates oath. The symbol of medical world, the two snake wrapped around the bonate has a

great significance. The limitations of use of plants to cure diseases was realised only when diseases such as typhoid, plague, small pox, started spreading in an epidemic scale and they could not be controlled easily by botanical means. Of course the discovery of antibiotic penicillin in second decade of this century from fungus *Penicillium* and the discovery of quinine from *Cinchona* came as a boon in control of many diseases mainly caused by bacteria and parasite respectively. Nevertheless, we can not over look the facts that these life saving drugs are mainly derived from plants. Today we find no substitute for quinine that can control malaria so effectively, no equivalent to penicillin with so broad application in controlling bacterial diseases without side effects. These discoveries of 20th Century leave a wide gap between what has been practiced in Ayurveda or Greek physicians during ancient time. The important conclusion to which medical work arrived at in the context of the above drug is efficacy of the medicine in controlling the epidemic diseases which develop or spread at a very fast rate such as typhoid, plague etc. Although many potent and effective medicines such as streptomycin or many other broad spectrum antibiotics are of fungal origin, yet many are synthetic which have emerged from alchemist test tube which are put to test by rigorous experimentation and brought under application.

However, the late realization of complications occurring by these Allopathic drugs in creating side effects and health problems have aroused new interest in traditional medicine of Asia in Europe and North America and provided new outlet's new botanical products. According to world health organization (WHO) a medicinal plant or part of any plant containing substances in one or more of it's organs that can be used for the therapeutic purposes; or several of them are put together for chemopharmaceutical semisynthesis.

In brief the medicinal plant which are in use to control, by and large, physiological disorders are analysed for their active ingredients and brought in use to cure the diseases. When we say here the medicinal plant, we are confine to higher plant for the active ingredients extracted from fungus such as Penicillium or Actinomycetes are also able to control the bacterial diseases. Today many plants have been throughly investigate and their active ingredients are extracted and used for controlling or curing certain diseases, for example, Colchicine from Colchicum autumnale or G. superaba or Iphigenia is a potent drug which can cure gout. Ephedrin is extracted from Ephedra which is known to be effective on Bronchites; forskolin steroidal diterpene has been introduced in market as an effective and efficacious antihypertansive drug by Hoechst's pharmaceutical is extracted from root tubers of Coleus forskohlii, similarly reserpine

from Raulphia. Sipla a pharmaceutical company has introduced 'GUGLIP' in the market as a curative drug which is claimed to correct cardiological problems which is of plant origin called Comofera mukul L.

A fore going examples clearly indicate that multinational pharmaceutical industries are greatly interested in exploiting medicinal principles in systematic way. In this contest the present investigation Tribulus terrestris L. a member of zygophyllaceae has been chosen to study various aspects of it such as cytological studies, physiological studies, physiological response to micronutrients in drug yield, the over all pattern of various different active ingredients of the seeds and leaves, different active ingredients of the seeds and leaves of different localities, influence of environment etc. have been investigated.