

# AN OVERVIEW OF THE MEDICINAL PLANTS

Shweta R. Sharma

*Department of Medical*

*Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India*

**ABSTRACT:** *Medicinal plants continue to play a dominant role in the healthcare system for a large proportion of the world's population, and this is especially true in developing countries, where herbal medicine has a long history of continuous use. In both industrialized and developing nations, the development and recognition of medical and financial aid for these plants is on the rise. Medicinal plants have played a crucial role in the growth of human culture. Medicinal plants have always been at the forefront virtually of all civilized cultures as a source of medicine. Medicinal plants are considered to be the rich resources of traditional medicines, and many modern medicines are produced from these plants. Medicinal plants have been used for thousands of years to treat health disorders, to add flavor, to preserve food and to prevent disease epidemics. Generally speaking, the secondary metabolites produced by plants are responsible for the biological characteristics of plant species used worldwide. In diverse situations, microbial growth is controlled by products derived from plants. We provided a general overview of the medicinal plants in this assessment.*

**KEYWORDS:** *Medicinal plant, Secondary metabolites, Drugs, Health care.*

## INTRODUCTION

For their simple requirements as the sources of medicines, shelters, foodstuffs, fragrances, clothing, flavors, fertilizers and means of transportation throughout the ages, human beings have depended on nature. Medicinal plants continue to play a dominant role in the healthcare system for a large proportion of the world's population, and this is especially true in developing countries, where herbal medicine has a long history of continuous use. In both industrialized and developing nations, the development and recognition of medical and financial aid for these plants is on the rise [1]. For thousands of years, the foundations of traditional traditional medicine systems that have existed have been formed from plants. The plants remain to offer new medicines to mankind. Some of the beneficial properties attributed to plants have been recognized to be flawed, and the treatment of medicinal plants is based on hundreds to thousands of years of experimental results.

The earliest reports carved on cuneiform clay tablets date from about 2600 BC are from Mesopotamia; oils of the Commiphora species (Myrrh), Cedrus species (Cedar), Glycyrrhiza glabra (Licorice), Papaver somniferum (Poppy juice) and Cupressus sempervirens (Cypress)

were among the materials used to cure diseases ranging from colds and cough to inflammation and inflammation. The traditional practice of medicine in China, India, Japan, Pakistan, Sri Lanka and Thailand is widespread. China alone accounts for approximately 40 percent of the total medicinal consumption of traditional tribal medicines [2]. Herbal medicines make use of legumes found in the Caesalpiniaceae, the Fabaceae, and the Mimosaceae in Thailand. More than US\$2.5 billion is estimated to have resulted from the sales of herbal medicines in the mid-90s. The demand for herbal medicines is higher than for mainstream pharmaceutical products in Japan. The contribution of plants is remarkable in diversified industries, such as fine chemicals, cosmetics, pharmaceuticals and drugs and industrial raw materials, etc. Medicinal plants play a dynamic part in the growth of fresh drug discovery. Medicinal plants have proven their unique role in dealing with a number of fatal diseases, including cancer and viral assault-related diseases. Hepatitis, AIDS and so on. In the drug market in the USA, approx. During 1950-1970, 100 new drugs produced by plants were presented, including vincristine, reseinnamine, vinblastine, deseridine and reserpine from various plants. New drugs, i.e. artemisinin, Zguggulsterone, ginkgolides, lectinam, E-guggulsterone, teniposide, ectoposide, plaunotol, and nabilone, appeared worldwide during 1971-1990. Irinotecan, toptecan, paclitaxel and gomishin etc. are the 2% of drugs that were presented during 1991-1995.

An innovative episode in the treatment of hypertension and lowering of blood pressure was the isolation of serpentine in 1953 from the Indian plant *Rauwolfia serpentine* root. Vinblastine was isolated from *Catharanthus rosesus* for the treatment of childhood leukemia, Hodgkin's choriocarcinoma, non-lymphoma, Hodgkin's and testicular and neck cancer [3][4]. *Nothapodytes nimmoniana* (*Mappia foetida*) is an indigenous Indian tree frequently used in Japan for the treatment of cervical cancer. Even today, plants are not only essential for health care, but are the best source of hope for safe medicines for the future [5]. In spite of the fact that we now have a number of modern drugs at our command, discovering and developing new therapeutic agents is still truly urgent. It has been estimated that only one third of the known human ailments are available for acceptable therapy. The fight against diseases must therefore be carried on relentlessly. Due to the minor side effects as well as the synergistic action of the combination of compounds, traditional plant medicines still enjoy a significant position in the modern-day drug industry.

Most of the significant medicines that have revolutionized modern medical practice in the past 50 years have been isolated/derivatized from plants. The therapeutic properties of plant and animal medicines are found in these chemical ingredients. The WHO endorses and supports the use of herbal medicines in national health care systems because they are readily available and time-tested at a price beyond the reach of an average citizen and are thus considered much safer than current synthetic drugs [6]. Research into pharmacologically/biologically active agents obtained by screening natural sources, such as plant extracts, has therefore resulted in the detection of a number of pharmaceutically useful drugs which play a key role in the treatment of human diseases [7]. Recently, phytochemical-pharmacological science has

provided effective alternatives to many diseases that the synthetic drug industry has not been able to afford.

The research work on *Artemisia annua*, *Cathranthus roseus*, *Taxus* spp., *Lantana camara* and *Baccopa* spp. are the most important among them. etc. etc. Such plants were historically thought to be toxic or useless, but have now been found to contain high drug-value molecules and are considered to be very useful medicinal herbs. Sophisticated bioassays and bioassay-guided fractionation of medicinal plants used by traditional healers are usually used in modern research for bioactive molecules. This has contributed to many new therapeutically relevant compounds being isolated. Due to the diligent efforts of researchers, a good number of potent drugs and a significant number of therapeutic leads and several new pharmacologically active components have been produced from herbal drugs [8]. The development of industrial-scale morphine by E. Merck, Germany, marked the beginning of the sale of plant-based drugs in 1826 [9]. In 1991, almost half of the highest selling pharmaceuticals were either natural products or derivatives of those products.

#### *Geographical Spread of the Medicinal Plants:*

The study of the distribution of medicinal plants indicates that they are spread through different ecosystems and elements of the landscape. In the Eastern and Western Ghats, Chota Nagpur plateau, Aravalis, Vindhyas and the Himalayas, almost 70% of the medicinal plants in India are found in tropical forests. The Kashmir Himalayan region is nestled among the Himalayas within the northwestern folds of the recently designated Himalayan global biodiversity hotspot [10]. It is an integral part of the primary Himalayan range, but geologically younger. This region's floristic riches provide a reasonably decent representation of medicinal plants. Kaul has described 111 Kashmir and Ladakh medicinal plants. He also referred to the healing properties of 291 species of medicinal plants from these regions in his book. However, due attention has not been paid to the medicinal flora of Kashmir and Kashmir alone may have at least two times this amount.

*Dioscorea deltoidea*, *Rheum Emodi*, *Arnebia benthamii*, *Inula racemosa*, *Datura stramonium*, *Aconitum heterophyllum*, *Artemisia* spp., *Podophyllum hexandrum*, *Juniperus macrospora*, *Hypericum perforatum*, *Hyoscyamus niger*, *Saussurea* spp., and *Picrorhiza kurroa* etc. are some of Kashmir Himalaya's most important medicinal plants, growing in abundance in areas such as Yusmarg, PirPanjal, Sonamarg, Gurez, Lolol. In addition, there are a variety of species of aromatic and medicinal plants cultivated in various high altitude regions of the Kashmir Valley. Caraway (*Carum cervi*), Saffron (*Crocus sativus*), Siya zira (*Bunium persicum*), Garlic (*Allium sativa*), Coriander (*Coriandrum sativum*), Mint (*Mentha* spp.), Fennel (*Foeniculum vulgare*) and Hare's foot are among the essential aromatic plant organisms (*Trigonella foenum-graecum*). Many of these plants are used in plant extracts that are standardised.

#### CONCLUSION

As there are around half a million plants around the world, there is a promising future for medicinal plants, and most of them are not yet investigated for their medical activities, and their latent potential for medical activities may be decisive in the treatment of present and future studies. Medicinal plants have played an important role in the creation of human society, such as beliefs and various ceremonies [11]. Many of the various modern medicines are derived indirectly from medicinal plants, such as aspirin, for example. Many food crops have medicinal effects, including garlic, for example. The research of medicinal plants helps to understand the toxicity of plants and to protect people and animals from natural poisons. The therapeutic effects of plants are due to secondary development of the plants' metabolites. There have been increased waves of interest in the field of research in the chemistry of natural products to keep this in mind. This interest may be attributable to several factors, including therapeutic requirements, the remarkable diversity of the chemical structure and biological activities of secondary metabolites that occur naturally, the usefulness of novel bioactive natural compounds as biochemical samples, the development of novel and sensitive techniques for the identification of biologically active natural products, improved isolation techniques, The World Health Organization (WHO) has also acknowledged the value of traditional medicine and has established policies, guidelines and standards for botanical medicine. The cultivation, processing of medicinal plants and development of herbal medicines needs the application of agro-industrial technologies. Medicinal plants are new drug resources and many of the current drugs are indirectly derived from plants.

#### REFERENCES

- [1] X. Zhang, "Regulatory Situation of Herbal Medicines: A worldwide review," *Who*, 1998.
- [2] A. Gurib-Fakim, "Medicinal plants: Traditions of yesterday and drugs of tomorrow," *Molecular Aspects of Medicine*. 2006, doi: 10.1016/j.mam.2005.07.008.
- [3] P. Harrison, "Herbal medicine takes root in Germany," *CMAJ*. 1998.
- [4] W. B. Jonas, "Alternative medicine - Learning from the past, examining the present, advancing to the future," *Journal of the American Medical Association*. 1998, doi: 10.1001/jama.280.18.1616.
- [5] M. Hamburger and K. Hostettmann, "7. Bioactivity in plants: the link between phytochemistry and medicine," *Phytochemistry*, 1991, doi: 10.1016/0031-9422(91)83425-K.
- [6] C.-J. Widén and D. M. Britton, "Chemotaxonomic investigations on *Dryopteris fragrans*," *Can. J. Bot.*, 1971, doi: 10.1139/b71-138.
- [7] R. R. and M. BN., *Compendium of Indian Medicinal Plants*. 1993.
- [8] M. N. Philipson, "A symptomless endophyte of ryegrass (*lolium perenne*) that spores on its host — a light microscope study," *New Zeal. J. Bot.*, 1989, doi:

10.1080/0028825X.1989.10414136.

- [9] M. J. Balunas and A. D. Kinghorn, “Drug discovery from medicinal plants,” in *Life Sciences*, 2005, doi: 10.1016/j.lfs.2005.09.012.
- [10] “Hotspots: Earth’s biologically richest and most endangered terrestrial ecoregions,” *Choice Rev. Online*, 2000, doi: 10.5860/choice.38-0922.
- [11] S. Hosseinzadeh, A. Jafarikukhdan, A. Hosseini, and R. Armand, “The Application of Medicinal Plants in Traditional and Modern Medicine: A Review of <i>Thymus vulgaris</i>,” *Int. J. Clin. Med.*, 2015, doi: 10.4236/ijcm.2015.69084.