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MEDICINAL PLANTS: A MINI REVIEW

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ABSTRACT

Medicinal plants are used as a source of drugs since prehistoric times. Nowadays in developing countries, assurance of the protection, quality, and usefulness of medicinal plants and herbal products has now become a key issue. The extensive use of herbal remedies and healthcare preparations is mentioned in the Vedas, Quran, and Bible. Medicinal plants are used for several years to flavor and safeguard food, to treat health disorders and to stop diseases including epidemics. The information about their healing properties has been communicated over the centuries. For an extended period of time, plants are anappreciated source of natural products for keeping human health, particularly within the last few years, with more demanding studies for natural therapies.As compared to modern Western medicine, herbal medicine covers a really anodyne and effective strategy within the treatment of cancer. Active compounds fashioned during secondary metabolism are usually liable for the biological properties of plant species used throughout the domain for various purposes, including the treatment of infectious diseases.

KEYWORDS: *Medicinal plants, chemotherapeutics, phytomedicines, antioxidant potential and antibiotics.*

INTRODUCTION

The term medicinal plants include various sorts of plants utilized in herbalism and a few of those plants have some medicinal activities.Medicinal plants are the "backbone" of traditional medicine, which suggests quite 3.3 billion people within the less developed countries consume medicinal plants on a day to day. [1]

Medicinal plants are the rich resources of ingredients which will be utilized in the event and synthesis of medicine. Further that these plants play a crucial role within the expansion of human cultures round the whole world.

India features a rich diversity of plant species in an in depth sort of ecosystems. Around 17.000 species of upper plants, of which approximately 8.000 species, are considered medicinal which are employed by village tribal communities like the Ayurveda.

Most of the developing countries are using traditional medicine and medicinal plant, as a basis for the upkeep of excellent health,

which has been keenly observed by UNESCO, 1996 [2]. Besides, increasing dependence on the utilization of medicinal plants within the developed societies has been drawn to the extraction and progress of some drugs and chemotherapeutics from these plants also as from traditionally used rural herbal remedies [3].

During the past decade, traditional systems of drugs became a topic of worldwide importance. Present evaluations suggest that, in many rising countries, an outsized section of the population depends on traditional practitioners and medicinal plants to satisfy the requirements of primary health care. Though modern medicines are available in these countries, herbal medicines (phytomedicines) have frequently maintained approval for historical and cultural reasons.

Raw materials of medicinal plants often used because the extraction of dynamic elements that are utilized in the synthesis of various drugs. As within the case of laxatives, blood thinners, antibiotics, and anti-malarial medicines, all contain ingredients from plants. Moreover the active ingredients of Taxol, vincristine, and morphine isolated from periwinkle, yew, and opium respectively.

As defined by WHO, health may be a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity. Medicinal plants can make a crucial influence on the WHO goal to make sure, by the year 2000, that each one peoples, worldwide, will lead a sustainable socio-economic productive life[4].

The practice of traditional medicine is prevalent in China, India, Japan, Pakistan, Sri Lanka, and Thailand. In China, about 40% of the entire medicinal consumption is endorsed to traditional tribal medicines. Extracts of the plant, commonly referred to as endod, are used as an efficient molluscicide to regulate schistosomiasis [5]. Other important examples are periwinkle, which produces anti-tumor agents like vinblastine and vincristine; and castor-oil plant, which yields the laxative--castor oil.

Medicinal herbs, possessing penile strength properties and anti-cancer principles are the stress of smuggling to import markets in Germany, France, Switzerland, Japan, the U.K., and the U.S.A. The best-known example, in recent times is *Nothadoytesfoetida*.

Ordinarily found in southern India and Sri Lanka , the herb is exploited as a source of anti-cancer drugs.

Medicinal plants are an integral element of research developments within the pharmaceutical industry. Such research emphasizes the isolation and direct use of active medicinal constituents, or on the event of semi-synthetic drugs, or still again on the active screening of natural products to yield synthetic pharmacologically-active compounds.

The world marketplace for plant-derived chemicals – pharmaceuticals, fragrances, and, color ingredients, alone exceeds several billion dollars per annum. Classic samples of phytochemicals in biology and medicine include taxol, colchicine, vincristine, vinblastine.

In Germany, over 1500 plant species come across in some 200 families and 800 genera are processed into medicinal productsToday, Bulgaria, Germany, and Poland are recognized as major exporters of plant-based medicinal products [6]. The development and commercialization of medicinal plant-based industries within the rising countries are reliant upon the supply of amenities and knowledge regarding upstream and downstream

bioprocessing, extraction, purification, and marketing of the economic potential of medicinal plants. Additionally, the absence of modernized socio-economic and public healthcare systems emphasizes reliance on rural and lower-income urban populations on the usage of traditional medicinal herbs and plants as corresponding aids to routine pharmaceutical market products. Modern evaluations suggest that over 9,000 plants have known medicinal applications in various countries, and this is frequently without having conducted comprehensive research amongst several indigenous and other communities [7].

FUTURE OF MEDICINAL PLANTS

Medicinal plants have a capable future because there are nearby half million plants around the world, and most of the plants medicinal activities haven't investigate yet, and their medical activities might be decisive within the treatment of present or future studies.

Table 1. Some medicinal plants of central India having good antioxidant potential (Krishnaiah et al. 2011) [9]

S. No.	Name of plant	Part studied	Active component (s)
1.	*Acoruscalamus*	Rhizome	Alkaloids
2.	*Aeglemarmelos*	Leaves	Alkaloids, Terpenoids, Saponins
3.	*Aloe vera*	Leaf	VitaminA, C,E, Carotenoids
4.	*Andrographispaniculata*	Whole plant	Diterpenes, Lactones,
5.	*Carica papaya*	Leaves	Terpenoids. Saponins, Tan-nins
6.	*Cassia fistula*	Bark	Flavonoids
7.	*Curculigoorchioides*	Rhizome	Alkaloids, Flavonoids
8.	*Emblica officinalis*	Seeds	Vitamin C, Tannins
9.	*Moringa olifera*	Seeds	Glycosides
10.	*Syzygium cumini*	Leaf	Triterpenoids, Ellagic acid

CHARACTERISTICS OF MEDICINAL PLANTS

Synergic medicine- All the plants ingredients interact simultaneously, so their uses can damage or supplement others or nullify their possible negative effects. Support of official medicine- within the treatment of complex cases like cancer diseases the components of the plants proved to be very vigorous. Preventive medicine- It's been proven that the constituent of the plants also characterized by their ability to halt the appearance of some diseases. This may help to reduce the utilization of the chemical remedies which can be used when the disease is already present [6].

Significance of medicinal plant to humans:

Medicinal plants have played an important role within the development of human culture, for instance religions and different ceremonies. Many of the fashionable medicines are produced indirectly from medicinal plants, for instance, aspirin. Many food crops have medicinal effects, for instance, garlic.

Medicinal plants are resources of latest drugs. It's estimated there are quite 250, 000 flower plant species.Studying medicinal plants helps to know plant toxicity and protect humans and animals from natural poisons.

Cultivation and preservation of medicinal plants protect biological diversity, for instance , metabolic engineering of plants. The medicinal effects of plants are thanks to metabolites especially secondary compounds produced by plant species. Plant metabolites include: primary metabolites and secondary metabolites.

Phytotherapy is the use of plants or plant abstracts for medicinal purposes (especially plants that aren't a part of the traditional diet). Phytochemistry is that the study of phytochemicals produced in plants, describing the isolation, purification, identification, and structure of an outsized number of secondary metabolic compounds found in plants.

•Thin layer chromatography (TLC)

•Gel (column) chromatography)

•High performance of liquid chromatography (HPLC)

•Gas chromatography (GC)

•Mass spectrometry

•Nuclear magnetic resonance

PLANT PRIMARY METABOLITES

Organic compounds produced within the Plantae have metabolic functions essential for plant growth and development produced in every plant. Include carbohydrates, amino acids, nucleotides, fatty acids, steroids and lipids.

PLANT SECONDARY METABOLITES

Organic compounds produced in Plantae don't have apparent functions involved in plant growth and development. Produced in several plant families, in specific groups of plant families or in specific tissues, cells or developmental stages throughout plant development. Include terpenoids, special nitrogen metabolite (including, on-protein amino acids, amines, cyanogenic glycosides, glucosinolates, and alkaloids), and phenolics [11].

CONCLUSION

Recent and renewed interest in medicinal plants coupled to developments in information technology has fuelled an explosion within the range and content of electronic information concerning medicinal plants as a re-emergent health aid [12]. Recently reviewed diverse sources of such information in traditional abstracting services also as during a sort of online electronic databases. As a results of such developments, access to indigenous peoples and cultures concerning medicinal plants is greatly facilitated. Furthermore, the active participation of such natural custodians and practitioners of valuable knowledge is guaranteed within the generation of research that specialize in screening programmers handling the isolation of bioactive principles and therefore the development of latest drugs [13].

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