



Pharmacognosy is essential for the evolution of new medicines: A review

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Abstract

Pharmacognosy gives a sound knowledge of the vegetable drugs under botany and animal drugs under zoology. It also includes plant taxonomy, plant breeding, plant pathology, and plant genetics and by this knowledge one can improve the cultivation methods for both medicinal and aromatic plants. Nowadays photochemistry (plant chemistry) has undergone the significant improvement. This includes a variety of substances that are accumulated by plants and synthesized by plants.

Keywords: pharmacognosy, plant breeding, plant pathology

Introduction

The term comes from two Greek words: "pharmakon" meaning drug or medicine, and "gnosis" meaning knowledge. Pharmacognosy is "the study of the physical, chemical, biochemical and biological properties of drugs, drug substances of potential drugs or drug substances of natural origin as well as the search for new drugs from natural sources".

Pharmacognosy is the study of medicinal uses of various naturally occurring drugs and its history, sources, distributions, method of cultivation, active constituents, medicinal uses, identification test, preservation methods, substituent's and adulterants.

Crude drugs

- Crude drugs are the drugs, which are obtained from natural sources like plant, Animals, minerals, microorganisms and they are used as such as they occur in nature without any processing except, drying & size reduction.
- Crude drugs is referred to the natural product that has not been in advanced in value or improved in condition by any process or treatment beyond that which is essential for its proper packaging and prevention from deterioration.

History of pharmacognosy

Drug discovery from natural products have played and continue to play an invaluable role as sources of drugs or lead compounds in the prophylaxis and treatment of diseases.

Plants, especially those with pharmacological uses have been the primary sources of medicines and have an advantage over other sources in drug discovery for various reasons.

'Pharmacognosy'- has been coined by the merger of two Greek words.

Pharmakon means Drug and Gnosis means knowledge i.e.- the knowledge of drugs.

The nomenclature 'Pharmacognosy' was used first and foremost by C.A. Seydler.

In about 77AD, Dioscorides, a Greek doctor. Kept a record of

about 600 kinds of crude drugs in his compiled book De Materia Medica, a book that had played an important role pharmacology and botany.

In 1815, C.A. Seydler, a German who used the word "pharmakognosie" in his book named Analecta pharmacognostica, was referred to as the father of pharmacognosy.

Work of Galen (131 -200)

Galen was Greek pharmacist; he worked on extraction of chemical constituent from the plants. He developed various methods of extraction therefore the branch of pharmacy which deals with extraction of chemical constituent from plants & animals is called as Galenical Pharmacy.

Hippocrates (460 – 360. B.C.)

Before the birth of Jesus. He was Greek scientist; he worked on human anatomy & Physiology Particularly on circulatory system & nervous system. He prepared famous oath for physicians, which is still taken by the physicians. He is known as father of medicine.

Indian history of pharmacognosy

It is about 5500 years old, in the sukta of Rigveda & Atharvaveda medicinal property of plant is given. There are several medicinal plants, which are given with their use. The old Ayurveda Books, Charak samhita & Sushrutsamhita described many medicinal plants.

Conclusion

This has done by the advanced technologies of cultivation, purification, identification (characterization) of pharmaceuticals from nature. Concepts of biochemistry and chemical engineering help in the improvement of collection, processing and storage technologies of pharmaceuticals. It also gives knowledge of chemotaxonomy, biogenic pathways for the formation of active ingredients. Newly detected plant drugs are converting into medicine as purified photochemical.

Pharmacognosy is essential for the evolution of new medicines because crude drugs are used for the preparation of galenicals or as sources of therapeutically active metabolites. In short Pharmacognosy is an important link between pharmaceuticals and basic science as well as ayurvedic and allopathic system of medicines.

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