

INTRODUCTION OF PHARMACOGNOSY

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❖ Pharmacognosy is derived from two Greek words

Pharmakon & Gnosis

Pharmakon – means 'Drug'


Gnosis - means 'Knowledge'

In brief Pharmacognosy means 'Knowledge of drugs'.

Study of drugs that originate in the plant & animal kingdoms.

Define pharmacognosy

- Pharmacognosy defined as a branch of bioscience which treats in detail medicinal & related products of crude or primary types obtained from plant, animal & mineral origin
- Pharmacognosy is study of physical, chemical, biochemical and biological properties of drugs, drug substance or potential drug or drug substance of natural origin.

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- Pharmacognosy is bridge between pharmacology & medicinal chemistry.
 - Pharmacognosy is bridge between Ayurvedic & Allopathic system of medicine.
 - Study of drugs from plant include the subject of botany, chemistry and pharmacology.

Crude Drugs: -

- Crude drugs are the drugs, which are obtained from natural sources like plant, Animals, minerals, marine, 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 77 AD, 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 in 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 suktas of Rigveda & Atharwaveda 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.

The Scope of Pharmacognosy:

- ✓ 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, plant genetics and by this knowledge one can improve the cultivation methods for both medicinal and aromatic plants.
- ✓ Nowadays phytochemistry (plant chemistry) has undergone the significant improvement.
- ✓ This includes a variety of substances that are accumulated by plants and synthesized by plants.

A vital contribution to the advancement of natural science:

- ✓ 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.

A vital link between pharmacology and medicinal chemistry:

- ✓ Newly detected plant drugs are converting into medicine as purified phytochemicals.
- ✓ Pharmacognosy is essential for the evolution of new medicines because crude drugs are used for the preparation of galenicals or as a 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.
- ✓ Pharmacognosy is a science of active principles of crude drugs and which can be help in dispensing, formulating, and manufacturing of dosage forms.
- ✓ In other way the complete knowledge of Pharmacognosy will help in the recent trend that is in industries,
- ✓ As a research tools and in new drug delivery systems, and all the departments of pharmaceuticals and one can improve the healthcare facilities across the world.