D.PHARM • FIRST YEAR

Pharmacognosy

CHAPTER 1

Introduction to Pharmacognosy



ENGLISH CHAPTER NOTES

DIPLOMA IN PHARMACY

INTRODUCTION TO PHARMACOGNOSY

DEFINITION

Pharmacognosy is the branch of pharmaceutical sciences that studies drugs of natural origin and their biological, chemical, biochemical and physical properties.

WORD ORIGIN

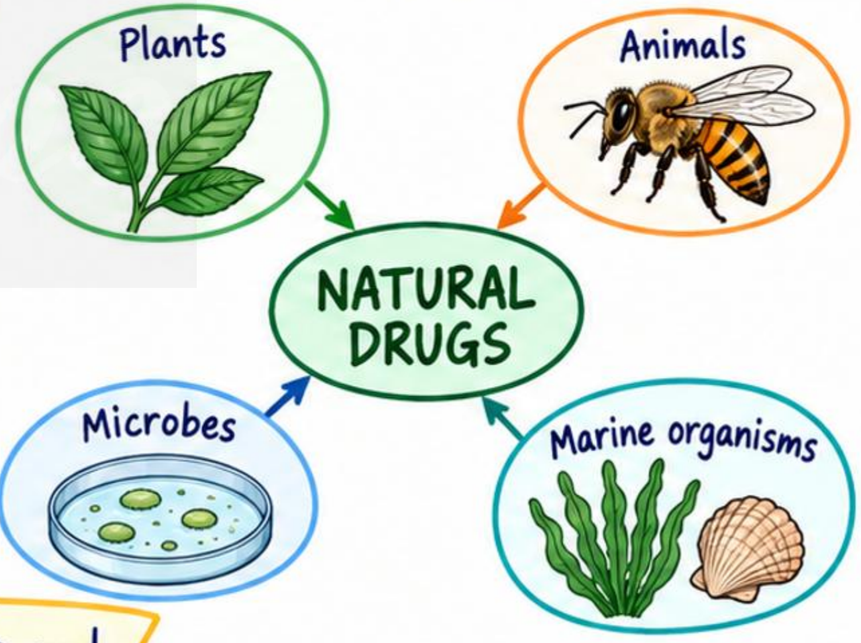
pharmakon = drug + gnosis = knowledge

→

pharmakon + gnosis → knowledge of drugs

NATURAL SOURCES

- Plants
- Animals
- Microbes
- Marine organisms
- Other natural materials



In simple words, Pharmacognosy is the scientific study of crude drugs and medicinal substances obtained from nature.

HISTORICAL DEVELOPMENT OF PHARMACOGNOSY

ANCIENT CIVILIZATIONS

Egypt, India, China and Greece used natural products as medicines.



c. 1500 BCE – EBERS PAPYRUS

An Egyptian record describing hundreds of herbal remedies.



INDIAN TEXTS

Charaka Samhita and Sushruta Samhita described medicinal plants and formulations.



1st CENTURY CE – DIOSCORIDES

De Materia Medica recorded many medicinal plants and their uses.



MIDDLE AGES TO RENAISSANCE

Herbalists and apothecaries preserved knowledge; botanical gardens encouraged systematic study.



18th–19th CENTURIES

Active constituents such as morphine from opium and quinine from cinchona bark were isolated.



20th CENTURY ONWARDS

Phytochemistry and molecular biology expanded natural-product drug discovery.



SCOPE AND DEVELOPMENT OF PHARMACOGNOSY

SCOPE

1. Identification and authentication of crude drugs
2. Isolation of bioactive compounds
3. Phytochemistry of medicinal plants
4. Pharmacological evaluation of natural products
5. Biotechnology and tissue culture
6. Quality control and standardization
7. Herbal drug formulation



MODERN DEVELOPMENT

1. Analysis tools
   - Chromatography, spectroscopy and molecular biology improve analysis of natural compounds.
2. Sustainable production
   - Demand for herbal medicines supports research on sustainable sources and biotechnological production.
3. New drug discovery
   - Natural sources contribute leads for antibiotics, anticancer agents and other medicines.

OUTCOME

⇨ Pharmacognosy connects natural resources, scientific evaluation, quality and safe pharmaceutical use.

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