



كلية العلوم

قسم علوم التقانة الاحيائية الطبية

Lecture: (1)

Level:

Subject :Medicinal plants

Level:Second

Lecturer: Najat hameed jasim



What's the meaning of Pharmacognosy

Definition

It is the study of medicines derived from natural Sources

Origin

It is derived from two Greek words:
pharmakon = gnosis





Century of pharmacognosy: (18th century)

This century called the century of pharmacognosy because of two Scientist who they contributed to the prosperity of Pharmacognosy

Johann Adam

Published (derMateria Medica) which was a work on medicinal plants and their properties



Linnaeus

(naming and classifying plants)



At the end of the 18th century, crude drugs were still being used as powders, simple extracts, or tinctures

The era of pure compounds (In 1803, a new era in the history of medicine) Isolation of morphine from opium, quinine and caffeine, nicotine atropine, cocaine. In the 19th century, the chemical structures of many of the isolated compounds were determined

In the 20th century, the discovery of important drugs from the animal kingdom, particularly hormones and vitamins. Microorganisms have become a very important source of drugs



The American society of pharmacognosy

The American Society of Pharmacognosy defines Pharmacognosy as “the study of the physical, chemical, biochemical and biological properties of drugs, drug substances or potential drugs or drug of natural origin as well as the search for new drugs from natural”.

ASP Is a scientific society that promotes the growth and development of pharmacognosy through a presentation of research achievements and publication of meritorious research.

Branch of Pharmacognosy

1. Ethanopharmacology
2. Ethnobotany
3. Phytotherapy
4. Phytochemistry



Botany

Includes description, identification, nomenclature, and classification of plants. Allows for correct ID of botanical drugs and subsequent pharmacological phytochemical, analytical, or clinical studies. Mistaken identity can relate in death (Ex. foxglove for comfrey)

Ethnobotany

Is the study of the traditional or folk use for medicinal purposes, so it's the relationship between people and plants. This field includes studying plants as medicines, alternative methods for healing, as wild foods, as agricultural crops.



Ethanopharmacology

Study the pharmacological qualities of traditional medicinal substances and how it relates to their physical habits and methodology in creating and using medicines.



Phytotherapy

The study of medicinal use of plants or plant extracts for medicinal purposes.

This means study herbal medicine with details of:

1. How the drugs work?
2. In which time should it be taken (after or before eating)?
3. Is it safe to be given to infant or pregnant ?

Phytochemistry

It's the study of chemicals derived from the plants (included the identification of new drugs candidates) derived from plants sources



Source of natural drugs

1. Plant kingdom
2. Animal kingdom
3. Microbial world
4. Marini world
5. Venoms & toxins

Definition of terms

1-Drug: is a substance of a natural or synthetic origin having medicinal or pharmacological properties.

2- Natural substances substances found in nature which consist of the whole plant or plant parts or from animal origin.

3- Crude drug: are natural substances of plant or animal origin which has not exposed to any process except collection & drying.

Definition of terms

4-Natural drug: A general term for any substance which is used in healthcare obtained from natural source.

5- Semi-synthetic drugs: are produced by the natural drug and treated it chemically to isolate the active ingredient and then modify it.

6- Indigenous plant: plants growing in their native countries.

types of drugs

There are 3 types of drugs:

1. Official drug
2. Unofficial drug
3. Non official drugs



The image features a scenic background of a calm lake reflecting a mountain range under a cloudy sky. On the right side, a small village with a wooden bridge is visible. Overlaid on this scene is a dark blue geometric pattern of interlocking hexagons. In the center, a diamond-shaped area with a red-to-purple gradient contains the text 'THANK YOU' in white, bold, sans-serif capital letters. This central area is framed by two concentric white lines: an outer diamond and an inner rounded rectangle.

**THANK
YOU**