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NAAC ACCREDITED

E-Content

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CONTENT

- SCOPE OF PHARMACOGNOSY
- CLASSIFICATION OF PHARMACOGNOSY

SCOPE

- The scope of pharmacognosy is broad and includes the scientific study of crude drugs, medicinal products (e.g., enzymes, vitamins, antibiotics,pesticides, allergens, and allergenic extracts).
- excipients(e.g.,coloring, flavuring, emulsifying and suspending agents, diluents, bulking).

SCOPE

- Research problems in the areas of phytochemistry, microbial chemistry, biosynthesis, biotransformation, chemotaxonomy, and other biological and chemical sciences.
- Studies on poisonous, hallucinogenic, and teratogenic plants
- Raw materials for the production of oral contraceptives, aphrodisiacs, etc.
- As well as spices, beverages, and condiments are included in the subject matters of pharmacognosy.

SCOPE

- Classification has its own merits and demerits, but for the purpose of study the drugs are classified in the following different ways.

- Alphabetical classification
- Taxonomical classification
- Morphological classification
- Pharmacological classification
- Chemical classification
- Chemotaxonomical classification
- Serotaxonomical classification

ALPHABETICAL CLASSIFICATION

- Crude drugs are arranged in alphabetical order of their Latin and English names (common names) or sometimes local language names (ver-nacular names). Some of the pharmacopoeias, dictionaries and reference books which classify crude drugs according to this system are as follows:
  - Indian Pharmacopoeia
  - British Pharmacopoeia
  - British Herbal Pharmacopoeia

TAXONOMICAL CLASSIFICATION

- In this classification the crude drugs are classified according to kingdom, subkingdom, division, class, order, family, genus and species as follows.
- ***Merits***

Taxonomical classification is helpful for studying evolution-ary developments.

- ***Demerits***

This system also does not correlate in between the chemical constituents and biological activity of the drugs.

MORPHOLOGICAL CLASSIFICATION

- In this system, the drugs are arranged according to the morphological or external characters of the plant parts or animal parts, i.e. which part of the plant is used as a drug, e.g. leaves, roots, stem, etc.
- ***Merits***

  This system of classification can be used for suggesting substitutes of drugs, if they are not available at a particular place or point of time.

- ***Demerits***
- Drugs having different action on the body get classified separately in more than one group that causes ambiguity and confusion. Cinchona is antimalarial drug because of presence of quinine but can be put under the group of drug affecting heart because of antiarrhythmic action of quinidine.

Chemical Classification

- Depending upon the active constituents, the crude drugs are classified. The plants contain various constituents in them like alkaloids, glycosides, tannins, carbohydrates, saponins, etc.
- ***Merits***

It is a popular approach for phytochemical studies.

- ***Demerits***

Ambiguities arise when particular drugs possess a number of compounds belonging to different groups of compounds.

Chemotaxonomical Classification

- This system of classification relies on the chemical similarity of a taxon, i.e. it is based on the existence of relationship between constituents in various plants. There are certain types of chemical constituents that characterize certain classes of plants. This gives birth to entirely a new concept of chemotaxonomy that utilizes chemical facts/characters for understanding the taxonomical status, relationships and the evolution of the plants.

Serotaxonomical Classification

- The serotaxonomy can be explained as the study about the application or the utility of serology in solving the taxo nomical problems.
- Serology can be defined as the study of the antigen–antibody reaction.
- Antigens are those sub-stances which can stimulate the formation of the antibody.
- Antibodies are highly specific protein molecule produced by plasma cells in the immune system. Protein are carri-ers of the taxonomical information and commonly used as antigen in serotaxonomy.


Thank
you