# Pharmacognosy

it’s the study of crude drugs obtained from plant , animals , minerals and microorganisms .

- The term of Pharmacognosy was introduced by C.A seydler { German scientist } in 1815 and this term derived from two Greek words :
- Pharm derived from Greek word (pharmakon) its mean drug .
- Cognos derived from Greek word (ginosco) its mean knowledge .

**In general the Pharmacognosy its mean natural drugs and their sources**

**The concepts of Pharmacognosy study:**

1. Taxonomy of natural sources (plants , animals and microorganisms )
2. Distribution , description and history of natural sources .
3. Active constituents of natural sources
4. Foundation of active constituents in the natural sources
5. The part used of the natural sources in the fields of medicine and pharmacy
6. Collecting and storage of part used
7. Physical and chemical properties of active constituents
8. Biosynthesis of active constituents
9. The true prescription of the natural drug (crude drug ) for people (human )

- **Note** :- plants are a main sources of natural drugs because many plants accumulate economically useful as chemical feed stocks or raw materials for various scientific and commercial application.

# The parts of plants (organized drugs )

- Leaves and tops (herb) may include leaves , flowers and fruits .
- Barks all tissues outside the cambium from trunks, branches or roots.
- Woods secondary tissues produced by the cambium or its inner surface .
- Leaves of leaflets
- Inflorescence and flowers
- Fruits
- Seeds

# Non organized drugs

These includes : fixed oils , fats , waxes , volatile oil , resins (volatile oil resins , oleoresins , oleogumresins ) balsams , gum , dried juices , lattices and extracts.

**Cell differentiation**

- The cell wall
- Parenchymatous tissue
- The epidermis
- Epidermal trichomes
- The endodermis
- Cork tissue
- Collenchymas
- Sclereids
- Fibers
- Xylem
- Secretory tissue

# The cell wall

There are different types of cell wall

- Cellulose wall
- Lignified wall
- Chitinized wall
- Cutinized wall
- Mucilaginum wall

# The epidermis

- Single layer of cells covering the whole plant , the structure of epidermis and stomata are the first important in the microscopically identification of leaves , e.g. straight walled epidermis in senna leaves , waxy wall in belladonna leaves
- Beaded wall in digitalis