Volgograd State Medical University
Department of Pharmacognosy and Botany

Medicinal plants classification systems

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A little bit of history

- The oldest classifications of medicinal plants and medicinal plant materials were "merchandising“.
- Objects in the 1st Russian Pharmacopoeia of 1778 were grouped in a similar way in all textbooks on pharmacognosy of the 19th and early 20th centuries.
- The participants in the preparation of the first pharmacopeia were pharmacist, pharmacognostic Juliy K. Trapp, doctor, pharmacognostic N. F. Mentin and famous Russian pharmacognostic, professor of Moscow State University V. A. Tikhomirov at al.

- The problem of classification of medicinal plant materials is primarily academic.
- Classification of medicinal plant materials determines the presentation of educational materials in the course of pharmacognosy.
- The final “Users" of reports and training courses are doctors, pharmacists and biologists.
- Currently, four classifications of medicinal plants and medicinal plant materials are used.

Botanical classification

- It is used in pharmacognosy mainly for the comparative characterization of the properties and characteristics of a group of medicinal plants belonging to the same family and genus.
- It is used in identifying the producing plant, determining the authenticity of medicinal plant materials by external attributes and microscopy.

Morphological classification

- It is based on an organ or part of a plant, which is used as a medicinal plant material.
- According to this classification lek. vegetable raw materials are divided into the following groups:
  - **Grass -** *Herba*
  - **Leaves** - *Folia*
  - **Flowers** - *Flores*
  - **Fruit** - *Fructus*
  - **Seeds** - *Semina*

Underground organs:

- **Roots** - *Radices*
- **Rhizomes** - *Rhizomata*
- **Rhizomes and roots -** *Rhizomata et radices*
- **Rhizomes with roots** - *Rhizomata cum radlcibus*
- **Tubers** - *Tubera*
- **Bulbs** - *Bulbi*
- **Corms** - *Bulbotubera*

- **Bark** - *Cortices*
- **Plant shoots** - *Cormus*
- **Buds** - *Gemmae*
- **Flower buds** - *Alabastra*

PHARMACOLOGICAL CLASSIFICATION

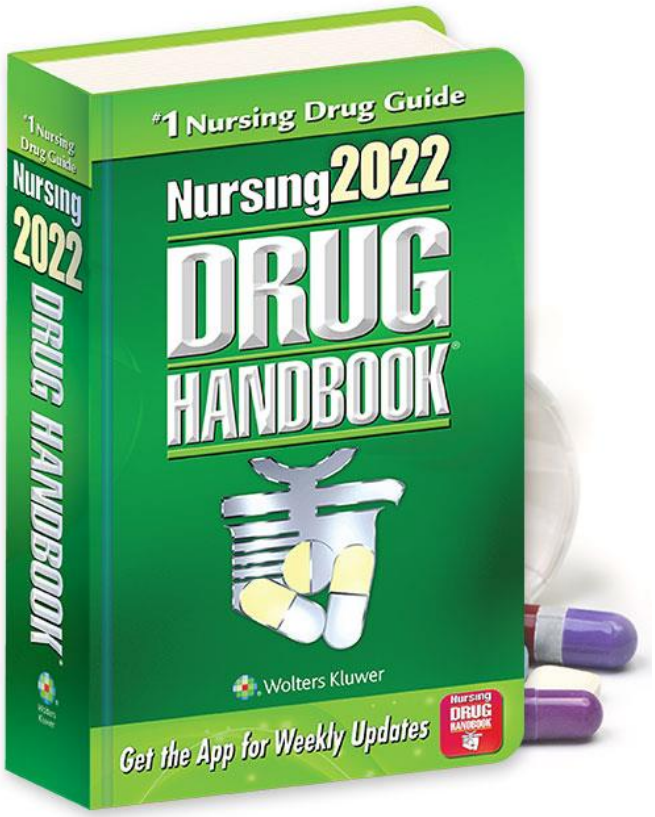
- This classification is used in the pharmacy for the distribution and dispensing of herbal medicines. It is convenient for doctors, so it is widely used in medicine.

According to the pharmacological classification of medicinal plants and medicinal plant materials are divided into the following groups:

- *anti-inflammatory;*
- *antimicrobial;*
- *cardiovascular action;*
- *astringents;*
- *laxatives;*
- *hypotensive;*
- *sedatives;*
- *choleretic;*
- *diuretics, etc.*

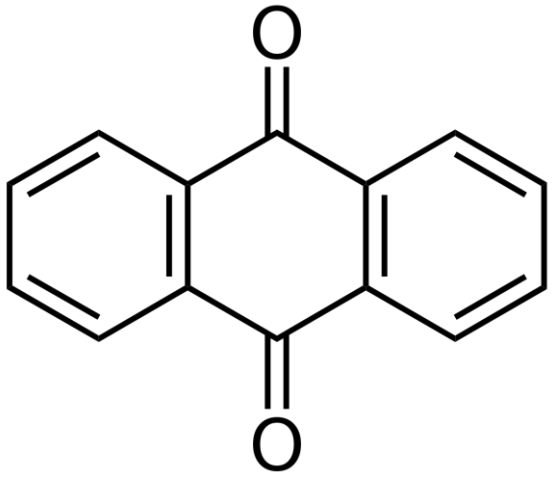
Pharmacological classification

In medicine guide books herbal remedies are placed according to the pharmacological classification



CHEMICAL CLASSIFICATION

- Chemical classification is the main one in pharmacognosy.
- Chemical classification is based on the principle of dividing plants and MPM into groups according to the chemical nature of the main biologically active substances of the medicinal plants.



Medicinal plants and herbal raw materials containing

- terpenoids;
- vitamins;
- cardiac glycosides;
- saponins;
- fats;
- alkaloids;
- flavonoids;
- tannins;
- anthracene derivatives;
- coumarins;
- chromones;
- simple phenols;
- other insufficiently explored

- According to chemical classification materials are arranged in many pharmacognosy textbooks published since the 30s of the XX century.
- The chemical classification is universal and partly includes botanical and pharmacological classifications.
- The chemical classification is widely used in qualitative and quantitative chemical analysis of medicinal plant materials.
- It is also used during the collection, drying and storage of medicinal products.

Hypericum perforatum in nature

Tangut rhubarb - Rheum palmatum L var tanguticum Regel .


THANKS
FOR ATTENTION