Classification systems of medicinal plants and medicinal plant materials.

The oldest classifications of medicinal plants and medicinal plant raw materials were purely "commodity research" in nature. With this approach, objects were grouped both by the plant organs used (roots, rhizomes, flowers, etc.) and by products obtained from plants (gum, resins, essential oils, etc.). Similarly, objects were grouped in the 1st Russian Pharmacopoeia of 1778. In all textbooks on pharmacognosy of the XIX and early XX centuries. XX centuries. Participants in the preparation of the first pharmacopoeia were Trapp Yuli Karlovich (pharmacist, pharmacognost), Mentin Nikolay Fedorovich (doctor, pharmacognost), Tikhomirov Vladimir Andreevich (the largest Russian pharmacognost, professor at Moscow State University) and others.

The problem of classification of medicinal plant materials is primarily of an academic nature, since it determines the sequence of presentation of educational materials in the course of pharmacognosy. In addition, the final "consumer" of reports and training courses is important - a doctor, pharmacist, or biologist.

Currently, four classifications of medicinal plants and medicinal plant materials are used.

BOTANICAL CLASSIFICATION.

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

MORPHOLOGICAL CLASSIFICATION.

It is based on an organ or part of a plant that is used as medicinal plant raw materials. In accordance with this classification, medicinal plant raw materials are divided into the following groups:

- Grass - Herba
- Leaves - Folia
- Flowers - Flores
- Fruits - 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 - Buibotubera

- Cortex - Cortices
- Shoots - Corraus (for example, wild rosemary shoots).
- Buds-Gemmae (for example, birch buds).
- Buds - Alabastra (for example, Japanese sophora buds).

This classification is not the primary one for pharmacognosy. It is used by MPM procurers for macro- and microscopic analysis of medicinal plant materials, since the preparation and analysis of various types of medicinal plant materials has its own specifics. This classification is convenient to use storing MPM and in the technology of herbal medicines.

PHARMACOLOGICAL CLASSIFICATION.

This classification is used in pharmacies for the distribution and distribution of herbal medicines. It is convenient for doctors, so it is widely used in medicine. According to the pharmacological classification, medicinal plants and MPM are divided into the following groups:

- anti-inflammatory drugs;
- antimicrobial agents;
- cardiovascular effects;
- binders;
- laxatives;
- antihypertensive drugs;
- sedatives;
- choleretic drugs;
- diuretics, etc.

According to the pharmacological classification, herbal remedies are placed in the Mashkovsky reference book and other reference books on medicinal plants.

Pharmacological classification is convenient in cases where the main emphasis is placed on the specifics of the use of a medicinal product.

However, this classification does not take into account the multiple pharmacological effects of most plants.

CHEMICAL CLASSIFICATION.

This classification is the main one in pharmacognosy. It is based on the principle of distribution of plants and raw materials depending on the chemical nature of the main group of biologically active substances contained in plants. For example:

- medicinal plants and LRS containing terpenoids;
- vitamins;
- cardiac glycosides;
- saponins;
- fats;
- alkaloids;
- flavonoids;
- tannins;
- anthracene derivatives;
- coumarins;
- chromons;
- simple phenols;
- medicinal plants and raw materials of different chemical composition and poorly studied.

According to this principle, materials in many pharmacognosy textbooks published since the 30s of the XX century are arranged.

This classification is the most acceptable, since it is somewhat universal and includes partly botanical and pharmacological classifications, because plants that are close in chemical composition are often close botanically and have similar pharmacological properties.

This classification is widely used in the chemical analysis of medicinal plant raw materials, both qualitative and quantitative. It is taken into account when collecting, drying, and storing MPM.

However, none of the classifications is universal, since any medicinal plant contains a complex of SUBSTANCES. The same plant can be found in several groups containing different species. For example, St. John's wort: St. John's wort contains tannins, flavonoids, anthracene derivatives, terpenoids, and all of them have a pharmacological effect. Depending on the dosage, the pharmacological effect may vary. For example, rhubarb: in small doses it has an astringent effect, and in large doses it is a laxative.

From the same plant, several types of raw materials can be harvested, which find different applications. For example, Japanese sophora-a tincture is prepared from the fruit, which is used as a bactericidal and tissue regeneration accelerating agent, preparations with P-vitamin activity "Rutin" and "Quercetin" are obtained

from the buds. Carotene is obtained from the pumpkin pulp, and the seeds are used as an anthelmintic. That is, different types of raw materials prepared from the same producing plant will have different chemical composition and pharmacological activity.

Plants belonging to the same family can be sources of a wide variety of MPM, and differ chemically and pharmacologically.