

Biology and Importance of Glycoside Medicinal Plants

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Abstract: The nature of Uzbekistan is distinguished by its unique beauty, sunshine, soil and water. That is why its flora is so rich. Many medicinal plants are widespread among our people due to their healing properties, and they are successfully used in folk and scientific medicine. This article discusses the biology and importance of medicinal plants that contain glycosides.

Key words: Medicinal plants, phytopreparations, coumarins, essential oils, flavonoids, vitamins, lignans, herbs.

The nature of Uzbekistan is distinguished by its unique beauty, sunshine, soil and water. That is why its flora is so rich. Many medicinal plants are widespread among our people due to their healing properties, and they are successfully used in folk and scientific medicine.

The study of medicinal plants found in the flora of the Republic, the identification of species, the definition of areas of distribution, accounting for the productivity of species that are a source of valuable raw materials and their use are not fully established. The most important of the current solutions are the interpretation of bioecological properties and distribution laws of medicinal plants, inventarization of species, identification of species that are a common source of valuable raw materials, identification of reserves, their application to productive, rational use without harming gene pools. [1-4]

It is used in medicine and pharmacy because the medicinal product contains biologically active substances that have therapeutic value in the treatment of diseases. Biologically active substances are often glycosides specific to certain plants (angishvonagul, strophanthus, adonis, pearl, cardiac glycosides specific to erysipelas, amygdalin specific to rhizomes, sinigrin and other isothiocyanates specific to rhizomes), coumarins, essential oils, others, flavonoids, flavonoids occur as substances.

At present, medicines made from medicinal plants are widely used. 18 types of herbs are widely used in the treatment of mental illness, 7 types in the treatment of cancer, 24 types in diabetes, 25 types in atherosclerosis, multiple sclerosis, 10 types in gastric diseases, 22 types in blood pressure diseases. In addition, medicines made from medicinal herbs help in the prevention of smoking and alcoholism, as well as in the regulation of cholesterol in the blood.

Organs of medicinal plants, which contain chemicals that affect the human body, are used in medicine. [5-7]

In order to obtain phytopreparations from medicinal plants, their chemical composition must first be thoroughly studied. To do this, the main active ingredient of the plant is identified, its structure, physical and chemical properties and pharmacological properties are studied. The main influencing substance is determined at what stage and in what part of the plant growth, methods of qualitative and quantitative determination are developed. During the growth of the plant, the quantitative change of the main active ingredient in it and the factors that cause this change are studied, and the time of preparation of the product is determined.

The effect of medicinal plants on the body depends on the amount of compounds in their composition. These compounds accumulate in different amounts in different parts of the plant. Necessary parts of the plant for the preparation of the drug are collected at different times. For example, bark, buds are taken in early spring, before or after flowering of leafy plants, when the flowers are fully open, fruits and seeds ripen, underground organs (roots, rhizomes and bulbs) are taken in early spring or late autumn.

Biologically active substances in plants are constantly changing during the period of plant growth - ontogeny and under the influence of various factors. They are synthesized, gradually increase, accumulate in large quantities over a period of time, then decrease, and may eventually disappear completely.

These changes are caused not only by the growth cycle of the plant - ontogeny, but also by external environmental factors.

Ontogeny is the period of normal life of any plant, which includes the period from the birth of a living organism to its natural death (drying out).

External environmental factors influencing the synthesis of medicinal substances in plants, changes in their accumulation include: plant growth, humidity (amount of moisture in the air and soil), soil composition, temperature (hot and cold air and soil), light and excessive sunlight or scarcity, climate, etc. [8-10]

It should be well known that each plant synthesizes a large number of biologically active substances that are appropriate for its specific conditions and climate in which it has studied, lived and developed. As mentioned above, when it comes to the distribution of medicinal plants, it is important to know the influence of the external environment (moisture, heat, light, soil composition, place of growth, etc.) on the growth, development and synthesis and accumulation of medicinal substances in them. conditions should be taken into account when transplanting to plantations. For each plant it is necessary to create as much as possible the specific conditions and climate when growing it on plantations.

The time of accumulation of many biologically active substances in plants also depends on the period of plant growth. The main active biologically active substances in the surface and leaves of most plants are before and after flowering, in flowers - at the time of their flowering, in fruits and seeds - when they are fully mature, in underground organs - at the end of the vegetation period (ontogeny) (late autumn).) accumulates in large quantities.

The maximum accumulation of the main medicinal substance in the composition of some medicinal products may not correspond to the above period. Some alkaloids have been found to accumulate in maximum amounts during the period when the plant is now sprouting and producing root roots, and then gradually declining and turning into other compounds during the flowering of the plant. Such changes can occur not only in alkaloids, but also in other biologically active substances. The flowers of the medicinal wormwood plant are collected not in the flowering period, but in their unopened buds. This is because the active biologically active substance accumulates to the maximum in the bud of santonin and decreases sharply when it begins to bloom.

From the first day a plant begins to grow, the biosynthesis of vitamins in the tissue begins. Their amount is constantly changing during the growth of the plant. This change depends on many factors. In particular, the place of growth and climate of the plant, light, mineral and organic fertilizers, moisture, trace elements, the composition and concentration of mineral salts in the soil, as well as acidic conditions are factors influencing the biosynthesis of vitamins.

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