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MEDICINAL PROPERTIES OF SOME PLANTS IN THE NURATA MOUNTAIN ECOSYSTEM

Makhammadiyev Davron Muyassarovich,
Abdullayeva Kamola Narzulla kizi,
Bozorboyeva Sarvinoz Bobomurod kizi
Lecturer, Jizzakh State Pedagogical University, Uzbekistan
2nd-year students, Biology Department, Faculty of Natural Sciences, Jizzakh State Pedagogical University, Uzbekistan

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Annotation: The importance of the plant world for living nature is immensely great. Plants contain biologically active substances that can cure certain diseases and have some effect on the human body. The effect of medicinal plants on the body depends on the amount of compounds in their composition. These compounds accumulate in different parts of the plant in varying quantities. The active substances of medicinal plants are alkaloids, various glycosides (anthraglycosides, cardiac glycosides, saponins, etc.), flavonoids, coumarins, tannins, and other mucilaginous substances. Essential oils, vitamins, resins, and other compounds may also be present.

Keywords: biologically active substances, alkaloids, glycosides, anthraglycosides, saponins, flavonoids, coumarins, tannins, essential oils, vitamins, resins, microorganisms, viruses, antibiotics, phytoncides, medicinal plants, leaf blade.

As we know, the importance of the plant kingdom for living nature is immensely great. As Academician Volkenshtein noted, "The plant world is the natural representative that ensures the continuity of life in the biosphere." It is worth noting that in recent years, the role of the plant world in human life has been continuously increasing. Plants contain biologically active substances that can cure certain diseases and have some effect on the human body. From this point of view, over 1500 medicinal plants are widely used worldwide. The effect of medicinal plants on the body depends on the quantity of compounds in their composition. These compounds accumulate in different parts of the plant in varying quantities.

The active substances of medicinal plants are alkaloids, various glycosides (anthraglycosides, cardiac glycosides, saponins, etc.), flavonoids, coumarins, tannins, and other mucilaginous substances. Essential oils, vitamins, resins, and other compounds may also be present. Many plants are used to prepare antibiotic- and phytoncide-rich preparations that destroy microorganisms and viruses. Since the main part of our country's flora consists of plants distributed in mountainous regions, medicinal plants found here are also numerically dominant.Below, we will examine some medicinal plants of the Nurata mountain range located in Jizzakh region and their characteristics.

Elecampane (Inula helenium) - A perennial herbaceous plant belonging to the Asteraceae family, reaching a height of 100-150 cm. Its stem is single or several, erect, hairy, with a branched upper part. The leaf blade has toothed margins, sparsely covered with stiff hairs on the upper side. The leaves on the upper part of the stem are sessile, while the lower ones are arranged alternately on the stem with short petioles. The flowers are golden yellow, clustered in a capitulum. The capitula form a

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corymbose or racemose inflorescence on the upper parts of the stem and branches. The fruit is an oblong, four-sided brown achene. The involucral bracts of the capitulum are arranged like tiles. The bracts are ovate, recurved, and covered with many hairs. The calyx of the flowers has turned into hairs, the corolla and stamens are 5 each, and the ovary is unilocular, inferior. The roots and rhizomes of elecampane are dug up in autumn or early spring. They are cleaned from soil, washed with water, and thick roots and rhizomes are cut crosswise and dried in the open air, i.e., in sunlight.

Its roots and rhizomes contain 1-3% essential oil, up to 44% inulin, other carbohydrates, and small amounts of alkaloids, benzoic acids, and saponins. Dried elecampane powder is used as an expectorant and for stomach and intestinal diseases. The population widely uses elecampane. The population primarily uses elecampane powder as a remedy for digestive and gastrointestinal diseases. In recent years, due to extensive collection of the roots and rhizomes of this plant by the local population, its numbers are decreasing year by year, even though they are still abundant. One of the most convenient conservation measures is to promote the use of widely distributed plants that can replace the medicinal properties of elecampane, such as Scentless Mayweed (Chamomilla recutita), Wild Marjoram (Origanum vulgare), and Hawthorn (Crataegus laevigata).

Chinese Rhubarb (Rheum palmatum) - Belongs to the Polygonaceae family. A perennial herbaceous plant reaching a height of 1.5-2.5 m. Its rhizome is short, multi-headed, dark brown, 4-6 cm in diameter, from which several thick, fleshy roots extend downwards. The leaf petiole is often red, and can reach 30 cm in length. The leaf blade is 75 cm in diameter, broadly ovate. The stem is thick, segmented, hollow, and sparsely branched. The flowers are small, clustered in panicles, consisting of pinkish-white or red petals. In its first year, rhubarb produces 5-7 basal leaves. Some plants produce stems in the second year, but most produce them in the third year. After the rhubarb plant reaches 3-4 years of age, its underground parts are dug up in the autumn months. Then, the thick roots are cut into 10-15 cm pieces, and the rhizome is also cut lengthwise and dried.Rhubarb preparations are used to soften the bowels in chronic gastrointestinal diseases, intestinal atony, and when gas accumulates. These preparations, when taken in small doses (0.05-0.2), constipate the bowels. When taken in large doses (0.5-2.0), they soften the bowels.

Rhubarb root is used in fine powder and tablet form. Decoctions and dry extracts are also prepared from rhubarb root. The fleshy leaf petioles of this plant are widely consumed by the local population in spring, but since the roots are not damaged, little harm is caused. Rhubarb root powder is widely used in traditional medicine. In the conservation of this plant, it is necessary to ensure that its roots are not over-collected.

St. John's Wort (Hypericum perforatum L.) - Belonging to the Hypericaceae family, it is a perennial herbaceous plant reaching a height of 30-100 cm. Its rhizome and root are profusely branched. The stem is several, erect, smooth, hairless, ribbed, with an oppositely branched upper part. The leaves are simple, oblong-ovate, with entire margins, arranged oppositely and sessile on the stem. The flowers are golden yellow, five-lobed, clustered in a corymbose inflorescence. The fruit is a three-celled, multi-seeded capsule that opens when ripe. The seeds are small, oblong, pitted, and brown.

The aerial parts of St. John's Wort contain 10-12% tannins, 0.1-0.4% anthracene derivatives, flavonoids, essential oils, and vitamin C.Preparations derived from St. John's Wort have astringent,

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antiseptic, and wound-healing effects, and are therefore used in medicine to treat gastrointestinal, oral cavity, and other diseases.

Tansy (Tanacetum vulgare L.) - A perennial herbaceous plant belonging to the Asteraceae family, reaching a height of 50-150 cm, with a distinctive odor. Its stem is erect, branched, hairless or slightly hairy. The leaves are simple, pinnately dissected, dark green on the upper side, and grayish-green on the lower side. The leaves on the lower part of the stem are petiolate, while the middle and upper ones are sessile and arranged alternately on the stem. The flowers are yellow, clustered in capitula, forming a corymbose inflorescence. The fruit is an oblong achene. It is distributed in Moldova, Ukraine, Belarus, the Far North of Russia, as well as Transcaucasia, the Urals, and other places, including our country.The Tansy plant contains essential oils, flavonoids (quercetin, myricetin, diosmetin), alkaloids, and tannins.

Preparations and infusions made from Tansy are used to expel roundworms and pinworms, and as a choleretic agent (e.g., Tanakin preparation) in liver diseases, as well as to treat certain intestinal disorders.

Our country has a very large territory, encompassing various climatic regions. Therefore, our country's plant world - its flora - is rich in diverse plants. Among them, there are many medicinal plants, and thousands of tons of medicinal plant products are prepared annually and used for treating and preventing diseases. No matter how abundant the natural resources of wild-growing plants in our country may be, they still have limits. Just as there is no endless wealth on Earth, the reserve of the plant world is not endless either. Therefore, if the resources of naturally growing plants are not used correctly, these "endless riches" may one day disappear from the face of the Earth. It is necessary to preserve them in a timely manner and pay serious attention to their conservation.

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