

BIOLOGICALLY ACTIVE SUBSTANCES OF SOME PERSPECTIVE MEDICINAL PLANTS OF UZBEKISTAN

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This article describes the distribution, useful properties, application and biologically active substances of three species of widely distributed medicinal plants of the family of Compositae growing in Uzbekistan.

In connection with the irrational harvesting of natural thickets of these medicinal plants and the excessive grazing of large numbers of cattle, as well as the expansion of arable land, there was an urgent need and introduction of these plants into the culture.

Key words: *sesquiterpene lactones, coumarin, flavonoid, infusion, extract, decoction, pharmacopoeia.*

Introduction. In recent years, due to a sharp reduction of medicinal plant resources and the conservation of biodiversity, the need arose for the introduction of most plants. To this end, a new direction of training specialists in the technology of growing medicinal plants was opened at our university. In this article, the distribution, application, and also active biologically active substances of three species of plants of the family of Compositae are presented.

Achillea millefolium L.

Perennial 5-120 cm in height. It grows in subalpine meadows, small-earth stony slopes in the arboreal-shrub belt, in the foothills, in the gardens, along the outskirts of roads and fields in the Tashkent, Samarkand, Andijan, Fergana and Surkhandarya regions. Useful properties and application. Rhizomes and roots are used as an analgesic for toothache. In Germany - to improve digestion and as a wound-healing means. The aerial part is included in the pharmacopoeia of many countries of Western Europe, the USA, and Mexico. Liquid extract and infusion of herbs are used as hemostatic agents, mainly in uterine bleeding because of inflammatory processes. Herb is a part of an appetizing collection. In practical medicine - in gastritis of various etiologies, stomach ulcer and duodenal ulcer, liver, kidney and urinary tract diseases, hemorrhoids, skin diseases, burns. In folk medicine, one of the most famous means; decoction, infusion, juice, ointment, lotions are used similarly in scientific and traditional medicine and, in addition, in malignant tumors, neuroses, pulmonary tuberculosis, bronchial asthma, heart diseases, kidneys, anemia, dysentery and diarrhea. Biologically active substances.

Sesquiterpene lactones: 8 acetoxyartabsin, acetylbalchanolide, achillicin, achillin, uastricin, balchanolide, 2,3-dihydroacetoxymatricin, hydroxyachillin, leucomisin, millefin, millefolide, matrikarin, matricin. Flavonoids: apigenin, luteolin, cosmosiin (apigenin 7-glucoside), 7-O- β -D-glucopyranoside luteolin, artemetin (artemisetin) casticin (5,3'-dihydroxy-3,6,7,4'- tetramethoxyflavon) 5-hydroxy-3,6,7,4'- tetramethoxyflavon, apigenin 7-glucoside (cosmosiin), luteolin 7-glucoside, isorhamnetin, ramosylglucoside quercetin, rutin.

Inula macrophylla L. - Inula

Perennial 60-250 cm tall. It grows on damp places in thickets of bushes from the foothills to the middle belt of mountains in the Tashkent, Samarkand, Andijan, Fergana and Surkhandarya regions. Useful properties and application. It is widely used for colds; decoction - in fever, typhoid fever; infusion - in lung diseases. The extract shows antitumor, antiviral activity against influenza A (PP) 8 virus, as well as antibacterial, antifungal, insecticidal activity. Rhizomes and roots are used in official medicine in the Netherlands. In scientific medicine, the decoction is used as an expectorant and disinfectant for acute and chronic diseases of the respiratory tract, influenza. On the basis of sesquiterpene lactones of roots and rhizomes, the drug Allanton was introduced. The drug is used for stomach ulcer and duodenal ulcer, erosive gastritis. It has anti-inflammatory, capillary strengthening and antiseptic effect; accelerates the regeneration of the gastric mucosa in ulcerative lesions. The drug in the experiment enhances the bile excretory function of the liver and has a protective effect when the liver is affected by carbon tetrachloride. In practical medicine, decoction - in neuroses, epilepsy, diabetes, atherosclerosis, in diseases of the stomach, pancreas, liver, gall bladder; inhalation - in acute respiratory infections. Biologically active substances. Sesquiterpene lactones: allantholactone, isoalantholactone, dihydroisoalantholactone, tetrahydroalantholactone, 1 β -hydroxyalantolactone, 2-oxoalantholactone, aspereline, 4 α -H-confertin, costunolide, 9 β -hydroxycostunolide, 9 β -isovaleryloxy-costunolide, 9 β -2-methylbutyryloxystunolide, germacren D Lactone, 1 β , 10 α -epoxy-1, 10 H-inulinide, 4 β , 5 α -epoxy-4,5H-inulinide, 4 α , 5 α -epoxy-10 α , 14 β -H-inuviscolide, 4-epiisoinuviscolide, 1-deoxy- 8-epiivangustine, 8-epiisovangustine, tomentosine (otosenin), 8-epitomentosine. Flavonoids: quercetin, kempferol 3-glycoside, quercetin 3-methyl ester, quercetin 7-triglycoside.

Conclusions. In connection with the irrational harvesting of natural thickets of these medicinal plants and the excessive grazing of large numbers of cattle, as well as the expansion of arable land, there was an urgent need and introduction of these plants into the culture.