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ABSTRACTS

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BIOLOGICALLY ACTIVE COMPOUNDS FROM PLANTS OF THE GENUS *Climacoptera*

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Currently, 15–20% of drugs are produced by Kazakhstan's pharmaceutical companies, so increasing of domestic drugs and suggesting of new methods of isolation of biologically active complexes are a priority and actual task. Therefore, a great theoretical and practical interest play plants of *Chenopodiaceae* family, *Climacoptera* genus, which are widespread in Kazakhstan and some of them are endemic plants.

For the first time in the framework of fundamental program the aerial parts of the plants *C. ambylostegio*, *C. subcrassa* and *C. korshinskyi*, which growing in the Almaty region were studied. A comparative study of the component composition and quantitative content of three plants. As a result, allocated 9 macro - and microelements, 20 amino acids, 8 fatty acids, 35 lipophilic compounds, 16 flavonoids, 1 carbohydrate, 1 purine substance and 5 saponins. According to the analysis of the *Climacoptera subcrassa* has a high content of flavonoids.

Investigation of lipophilic composition of the plants by the method of supercritical fluid CO₂ extraction. A comparative analysis of essential oils using GC-MS. Establishment of the chemical composition of *Climacoptera* lipophilic compound revealed the presence of 70 compounds. In *C. subcrassa* identified 11 components, while in *C. korshinskyi* – 16 components were identified and *C. ambylostegio* – 8 component. For the isolation of biologically active complexes effective solvents, the optimal block scheme of separation of substances, material balance and laboratory regulations were proposed. For effective separation of butanol extract of a plant of genus *C. subcrassa* used as a macroporous AB-8. A quantitative analysis of flavonoid complex by HPLC was done, as a result 8 flavonoids were determined.

As a result of scientific research isolated 23 individual substances, which structures established by modern spectral analysis methods.

9 biologically active complexes for bioscreening for various activities were elaborated. As a result of bioscreening of biologically active complex showed antioxidant and antibacterial activities. Main components of an antioxidant activity are flavonoids, quercetin glycosides and isorhamnetin. For antibacterial effect of biologically active complex are responsible arbutin, hypsogenin glycosides and adenine.

First identified phytotoxic activity of the ethyl acetate extract of plants of the genus *Climacoptera*.