

## The search for new sources of triterpene saponins among the representatives of the *Salvia* genus in the flora of Ukraine

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**Background.** Over the past ten years, more than 700 scientific papers on the study of triterpenoids were published. Recent studies have shown that triterpene saponins are able to inhibit hyperglycemia and lipid peroxidation, exhibit the antioxidant activity, provide organoprotection of the heart, lungs, liver, brain, reveal the anti-inflammatory activity, improve anabolic processes in skeletal muscles, prevent development of osteoporosis. Therefore, the search for new sources of triterpene saponins to expand the domestic raw material base of medicinal plants and creation of new drugs on their basis is an urgent task [1, 2, 4, 5, 6]. The aim of our work was to study the qualitative and quantitative content of triterpene saponins of leaves of the representatives of the *Salvia* genus in the flora of Ukraine.

**Materials and methods.** The analysis of the composition of triterpene saponins was carried out in the leaves of *S. officinalis*, *S. grandiflora*, *S. pratensis*, and *S. verticillata* by the method of high-performance liquid chromatography (HPLC) using a Shimadzu LC20 Prominence chromatograph. Identification of the components was performed by the retention time and compliance of the UV spectra with the standard substances [3].

**Results.** The quantitative content of 8 saponins in the leaves of the *Salvia* genus of the Ukrainian flora was identified and determined by HPLC. In the leaves of *Salvia officinalis* 8 saponins were identified. Ursolic acid (7.74273 mg/g), and oleanolic acid (2.46413 mg/g) were dominant; their total content was 75.82%. In the leaves of *Salvia grandiflora* 8 saponins were identified. Ursolic acid (4.25439 mg/g) and euscaphic acid (2.48355 mg/g) prevailed, their total content was 63.25%. In the leaves of *Salvia pratensis* 5 saponins were identified. Lupeol (2.52083 mg/g), ursolic acid (2.12771 mg/g) and euscaphic acid (5.46718 mg/g) dominated; their total content was 82.3%. In the leaves of *Salvia verticillata* 6 saponins were identified. Betulin (4.05584 mg/g), ursolic acid (5.26441 mg/g) and euscaphic acid (3.31237 mg/g) were dominant; their total content was 83.72%. The total content of saponins is the largest in the leaves of *Salvia verticillata*, and it is 15.08758 mg/g.

**Conclusions.** As a result of the studies of the saponin composition of sage leaves of the flora of Ukraine the quantitative content of 8 compounds has been identified and determined. The results of the study of the composition of saponins in the study objects indicate the prospects of using the leaves of both the official species of *Salvia officinalis* and the non-pharmacopoeial species: *Salvia grandiflora*, *Salvia pratensis* and *Salvia verticillata* as sources of triterpene saponins and creation of new drugs on their basis.

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