

POSTER PRESENTATIONS

EVALUATION OF THE PHARMACOLOGICAL ACTIVITY OF A COMPOSITION CONTAINING METABOLITES OF *Leonurus turkestanicus*, *Astragalus pterocephalus*

D.A. Narbutaeva, M.A. Agzamova, D.T. Asilbekova

*S.Y. Yunusov Institute of the Chemistry of Plant Substances, 77, Mirzo-Ulugbek Str.,
Tashkent, 100170, Uzbekistan, e-mail: agzamova_manzura@mail.ru*

Effective natural remedies based on medicinal plants are essential for the treatment and prevention of human diseases. It is known that *Leonurus cardiaca* L. and *Leonurus quinquelobatus* Gilib. (Lamiaceae family) are the official species of motherwort in the pharmacopoeia. Extracts of these plants, and in Uzbekistan – *Leonurus turkestanicus* B.Krech. and Kupr. and *Leonurus panceroides* M.Pop. are used in the form of galenic preparations as sedatives and hypotensive agents.

Among the pharmacologically active components of motherwort, genkwanin (diterpene) exhibits antioxidant activity. This fact indicated the possibility of using the local species *L. turkestanicus* (Turkestan motherwort) not only as a sedative. The plant *Astragalus pterocephalus* Bunge. (Fabaceae family), containing cyclosiversioside F (astragaloside IV), also exhibits similar activity [1, 2].

The aim of this study was to investigate the antioxidant and antihypoxic activity of a composition containing metabolites from the aerial parts of *Leonurus turkestanicus* and *Astragalus pterocephalus*. Motherwort and milk vetch extracts were used in specific ratios to account for the content of the main bioactive metabolites.

The antioxidant and antihypoxic efficacy of the original extracts and composition was assessed in vitro by measuring malondialdehyde accumulation under conditions of iron-induced ascorbate-dependent lipid peroxidation. Dihydroquercetin 25 mg (Evalar, Russia) was used as a reference drug.

The results showed that the composition was more effective (60%) than the original extracts from *Leonurus turkestanicus* and *Astragalus pterocephalus*. The composition significantly increased lifespan by 49.4% (27.8 ± 1.22 min). Dihydroquercetin had a 45.5% effect (27.0 ± 1.50 min).

Thus, it was revealed that the bioactive metabolites of the two plants (iridoids, flavonoids, and glycosides) collectively exerted a positive effect on the animals, exerting antioxidant and antihyperoxidic activity.

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References:

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2. Agzamova M.A., Isaev I.M. *Chem. Nat. Compnds.* 52(3): 501-502. (2016).