

Study of Chemical Composition and Biological Activity of *Salsola Collina* *Pall*

Ludmila N. Pribytkova, E. A. Kulmagambetova, Sergazy M. Adekenov

Institute of Phytochemistry, 470032, Karaganda, Kazakhstan

Fax: 003212511023, E-mail: arglabin@phyto.karaganda.su

Kazakhstan flora is abundant with herbal plants and it is very important to further its studying in order to select useful species for development of domestic phytopreparations. *Salsola collina* *Pall.* growing in steppe zones of Northern and Central Kazakhstan was included into this category.

We obtained a biologically active complex (BAC) which has hepatoprotective activity. Its high antihepatotoxic activity was determined on the model of acute toxic CCl₄ – hepatitis compared to the standard Legalon preparation. Its preventative activity was found on atherosclerosis model.

To establish its chemical composition we've chosen a method for quantitative determination of flavonoids in BAC, quantitative content of polysaccharides ($\approx 13,0$ %) and tanning agents ($\approx 3,9$ %) was determined by known methods (SP, XI, 1st issue). To determine quantitative and qualitative make-up of aminoacids we used aminoacid analyser of AAA-881 type, manufactured by «Kovo» company (Czechia) and standard mixture of aminoacids as external standard. Elemental composition of aerial part of *S. Collina* *Pall.* and that of preparation developed from the biologically active complex were determined by emission spectral analysis that had high sensitivity. The sample were ashed in the muffle furnace at temperature 500 °C, and then were analysed with the help of ISP-30 spectrograph. The ash of the sample contained microelements: Mn, Al, Cu, Si, Mg, Na, K etc. No excess of maximally admitted concentration was detected. A number of individual compounds were isolated and identified from the extract: flavonoids, phenoloacids and carbohydrates.

Corresponding normative and technical documentation for *Salsola Collina* *Pall.*, substance of new hepatoprotective preparation and its tablets form was prepared. Second phase of clinical trials has been started according to the decision of Pharmacology Committee of Ministry of Health of the Republic Kazakhstan.