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Biologically active substances and anti-inflammatory properties of dry extract of *Leonurus sibiricus* L. (*Lamiaceae*)

Tatiana V. Kornopoltseva,[1*+] **Elena A. Botoeva**,[2] and **Yulia Yu. Shurygina**[3]
[1] *Laboratory for Biomedical Research. Institute for General and Experimental Biology, Siberian Branch of the Russian Academy of Sciences. Sakhyanova St., 6. Ulan-Ude. Russia. Phone: +7 (9021) 64-55-81. E-mail: tv-kornopol@mail.ru*
[2] *Department of Obstetrics and Gynecology with a course in Pediatrics. Buryat State University. Smolina St., 24a. Ulan-Ude. Russia.*
[3] *Department of Social Technologies. East Siberian University of Technology and Management. Klyuchevskaya St., 42. Ulan-Ude. Russia.*

*Supervising author; +Corresponding author

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Abstract

The object of this study was the dry extract of the aerial part of the *Leonurus sibiricus* L., which has long and successfully been used in folk medicine. In Tibetan sources "ganga chung" (*Leonurus*) is a remedy that "cures poisoning and stops diarrhea from fever", "stops diarrhea caused by poison or fever." The effectiveness of Siberian motherwort preparations is explained by the rich chemical composition of biologically active substances. In the experiment, motherwort infusions and decoctions have sedative, thromboletic, antibacterial and anti-inflammatory properties. By the remaceration method, taking into account optimal conditions, a dry extract was obtained, which is a finely dispersed brown powder with a pleasant odor and a sweetish astringent taste, with a moisture content of no more than 5%, the weight loss on drying does not exceed 5%. Differential scanning calorimetry revealed that the main moisture removal begins at a temperature of 50 °C, and at 150 °C, the extract decomposes. Using standard samples, the extract proved the presence of (+)-catechin, (-)-epigallocatechin gallate, quercetin, gallic, caffeic, chlorogenic acids, rutin, apigenin, linoleic acid, stachydrin, β-carotene. Analysis of the data showed a favorable effect of the test dry extract on the indicators of the severity of the inflammatory process in the blood of animals with endometritis. The erythrocyte sedimentation rate when using the tested phytoextract was 1.2 times lower than in the control group on the 7th day; 1.6 times on the 14th and 21st days, respectively. The number of leukocytes during treatment with motherwort was 1.2 times lower than in the control group of animals at all periods of observation. The effect of Kaleflon on the recorded indicators in acute endometritis in rats was also positive, but

it was inferior in all the studied indicators to the results of the influence of extract. Pathomorphological research and assessment of the dynamics of changes in the indicators of the activity of the inflammatory reaction proved the pharmacotherapeutic efficacy of the use of dry extract from the aerial part of the Leonurus in experimental endometritis.

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