# EVALUATION OF THE ANTIMICROBIAL ACTIVITY OF COMMON SAGE EXTRACTS ON INFECTIOUS COLITIS MODEL IN WHITE RATS

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The actual direction of modern science is the search and development of new drugs based on domestic raw materials, namely Common Sage (SC). It is known about anti-inflammatory and antimicrobial properties of this plant. In previous studies, we have established the antimicrobial effect of SC in vitro. Therefore, it is perspective to study the antimicrobial effect of CS on infectious colitis in laboratory rats.

Induction of dysbacteriosis, infecting, treatment and elimination of rats from the experiment was carried out in accordance with the provisions of the Decree of the First National Congress on Bioethics "General Ethical Principles of Animal Experiments" (2001).

To create experimental dysbiosis, the animals were immunosuppressed by intramuscular injection of cyclophosphamide for 7 days. Exogenous microbial load was performed by introducing into the stomach 1 ml of a suspension of *Staphylococcus aureus (S. aureus), Candida albicans (C. albicans)* for 3 days. Animal treatment was started at day 11 and continued for 5 days. Rats were divided into groups of 6: group No. 1 (CS leaves dry extract obtained with 50% ethanol 50 mg / kg), group No. 2 (rifaximine 10 mg/kg), group No. 3 control (water). Microbiological examination of the feces was performed at day 11 and day 15.

On the 11th day of the experiment, in all three groups developed the phenomena of dysbiosis: a decrease in the number of *E. coli* was noted, the increased number of *S. Aureus*, a decrease in the amount of *Bifidobacterium*, an increased amount of *C. albicans*.

On the 15th day of treatment, as a result of a study of feces of rats, it was found that in group No. 1 the following indicators returned to normal: the total number of *S. aureus, E. coli, Bifidobacterium*. A small number of samples remained increased amount of *C. albicans*. In group No. 2 all indicators of intestinal microflora returned to normal amounts.

Previously, experimentally we determined the antimicrobial activity of CS extracts in vitro. As a result of this experiment, we can conclude that in the rat model, CS extract has a comparable antimicrobial effect with rifaximin, except for the effect on *C. albicans*. CS extract is a promising safe substance for the further study and development of herbal medicines based on it.