

**THE ANTIBACTERIAL ACTIVITY OF *CRUCIATA LAEVIPES* OPIZ.
HERB AGAINST *BORDETELLA PERTUSSIS* STRAINS**

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Introduction. Nowadays, an antimicrobial therapy is an important part of the current clinical medicine. Due to an emergence and a spread of new resistant microorganisms, an urgent task is an improvement of therapy of infectious diseases and development of effective and safe antibacterial agents with a wide range of activity. Among promising sources of biologically active substances (BAS) with antimicrobial activity, objects of plant origin are of special interest.

Aim. The present research aimed at the determination of antibacterial activity of *Gruciata laevipes* herb against museum strains of *Bordetella pertussis*.

Materials and methods. The objects of the study were lipophilic and phenolic complexes obtained from *C. laevipes* herb by the method of successive exhaustive extraction in Soxhlet apparatus. The activities of complexes were studied against *B. pertussis* 1, *B. pertussis* 28, *B. pertussis* “Kotliar” and *B. pertussis* “Efimov” museum strains. The sensitivity levels were determined by the serial dilution method.

Results and discussion. The lipophilic complex from *C. laevipes* herb exhibited moderate activity in relation to all *B. pertussis* museum strains (with minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) 62.5 µg/ml and 125 µg/ml, respectively). At the same time, all the studied *B. pertussis* museum strains were highly sensitive to phenolic complex from *C. laevipes* herb (MIC – 31.25 µg/ml and MBC – 62.5 µg/ml).

We believe, that *B. pertussis* strains are more sensitive to *C. laevipes* herb phenolic compounds, namely hydroxycinnamic acids and flavonoids, than to terpenoids and fatty acids, what can explain 2-fold activity of phenolic complex compared to lipophilic complex.

Conclusions. The antibacterial activity of lipophilic and phenolic complexes from *Gruciata laevipes* Opiz. herb against *Bordetella pertussis* museum strains was first studied. Established was high activity of the phenolic complex and moderate activity of the lipophilic complex against all *B. pertussis*. strains.

More in-depth research into correlation between levels of established antibacterial activity and sum of different groups of BAS, as well as individual compounds are required. Also, an identification of mechanisms of antibacterial activity of the studied complexes is of scientific interest.