

# CYTOPROTECTIVE THERAPY FOR PATIENTS WITH RESPIRATORY PATHOLOGY: PROPERTIES OF ECTOIN

S. V. Zaikov, A. E. Bogomolov, L. V. Mikhei

## *Abstract*

In light of the often irrational use of antibiotics, the growing problem of antibiotic resistance of respiratory pathogens and certain imperfections in the management of patients with acute and chronic rhinosinusitis, acute and chronic bronchitis, exacerbations of chronic obstructive pulmonary disease, there is always a need to seek for a new (non-antibacterial) methods of treatment to increase the effectiveness of therapy in these categories of patients. Probably, cytoprotection may also become one of these methods.

*Aim* — to analyze the results of ectoine use as a respiratory cytoprotector.

*Material and methods.* Analysis of available scientific publications on the use of ectoine in medical practice has been done.

*Conclusions.* Ectoin is a natural molecule of extremolyte that strengthens the bonds and the number of neighboring water molecules, organizes water from a chaotic fluid into a structured Ectoin® Hydro Complex, which surrounds mucous cells with a protective layer of water and leads to barrier protection of the mucous membrane. The natural molecule of ectoine has anti-inflammatory, membrane-stabilizing and cytoprotective properties. Ectoin is used for barrier protection and recovery of the mucous membrane of the respiratory tract in acute and chronic diseases of the upper and lower respiratory tract. Efficacy and safety of ectoine, including its long-term use, were proved by the results of preclinical and clinical studies.

**Key words:** cytoprotective therapy, ectoine, respiratory pathology