

## FLAVIN7 AND ALLERGIC ASTHMA IN EXPERIMENTAL CONDITIONS

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**Introduction:** The objective of this study was to determine whether a 21-day treatment with Flavin7 results in significant inhibition of asthmatic reaction and to estimate the therapy combined effect of this substance with clinically used antiasthmatic- budesonide in an animal model of asthma.

**Methods:** The airways defence mechanisms: cough reflex induced by citric acid aerosol ( $10^{-3}$  mol.l<sup>-1</sup>) and specific airway resistance (sRaw) after histamine nebulisation ( $10^{-6}$  mol.l<sup>-1</sup>) were assessed by *in vivo* method. Ciliary beat frequency was evaluated by „brushing“ method. The levels of cytokines IL-4, IL-5 and IL-13 in serum and bronchoalveolar fluid were used as the inflammatory parameters and estimated by BioPlex method. Transforming growth factor - $\beta$  (TGF- $\beta$ ) was evaluated by ELISA method.

**Results:** Tested substances showed: a significant decrease of sRaw and suppression of cough reflex. Flavin7 modified ciliary beat frequency on physiological values. Our results demonstrated the anti-inflammatory effect as well as anti-remodeling activity of Flavin7. The effects of Flavin7 were comparable to budesonide.

**Conclusion:** These results indicate that Flavin7 may be useful in the asthma treatment and also confirm the possibility of its use in the combination therapy.

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