

## **INFLUENCE OF CRAC CHANNEL BLOCKER ON AIRWAYS REMODELLING CHANGES IN EXPERIMENTALLY-INDUCED ALLERGIC ASTHMA CONDITIONS**

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Airway remodelling in asthma is characterized by a variety of structural changes correlated with persistent airflow obstruction and limited full response to antiasthmatics. Among other mechanisms, airway remodelling involves Ca influx through Ca<sup>2+</sup>-release-activated Ca channels (CRAC). Thus, using ovalbumin-induced experimental guinea pig model of airway remodelling, we proved if long-term inhibition of CRAC channel activity using blocker -fluoropyridine- -carboxylic acid (FPCA) dose mg/kg bw i.p. influenced remodelling changes. The structural features of airway remodelling and anti-remodelling effect of FPCA were confirmed by immunohistochemical analysis concerned on airway subepithelial fibrosis, smooth muscle and goblet cells hyperplasia. The transition in chronic airway inflammation mechanisms and FPCA anti-inflammatory effect were assessed by BioPlex assay. Evaluated levels of pro- and anti-inflammatory cytokines in plasma and BALF. In airway remodelling, FPCA lowered specific airway resistance (sRaw) values under the basal condition and induced by contractile mediators histamine and methacholine. Unlike sRaw, citric acid had limited ability to induce cough and frequency of cilia beating was lowered in airway remodelling. Neither cough reflex nor cilia beating was influenced significantly by FPCA. We concluded that FPCA after long-term treatment showed significant suppression of remodelling structural features, degree of allergic inflammation with positive effect.