

Publication

Airway smooth muscle cells respond directly to inhaled environmental factors

JournalItem (Reviews, Editorials, Rezensionen, Urteilsanmerkungen etc. in einer wissenschaftlichen Zeitschrift)

ID 1197377

Author(s) Roth, Michael; Tamm, Michael

Author(s) at UniBasel [Roth-Chiarello, Michael](#) ; [Tamm, Michael](#) ;

Year 2010

Title Airway smooth muscle cells respond directly to inhaled environmental factors

Journal Swiss medical weekly

Volume 140

Pages w13066

A misled or overreacting immune response is assumed to be the major cause of the most prevalent chronic inflammatory lung diseases, asthma and chronic obstructive pulmonary disease (COPD). The contribution of tissue forming cells, especially of airway smooth muscle cells, to the pathologies of both diseases has only recently attracted some attention. New studies in childhood asthma and a rhesus monkey model strongly suggest a central role of the airway smooth muscle cells in lung development, structure, function and response to environmental factors. Airway smooth muscle cells express and respond to activation of IgE receptors. In addition, airway smooth muscle cells recognise and respond to environmental factors, including allergens and dust, via mechanisms that are independent of the immune system such as PAR2 or calreticulin. Interestingly, these changes occur not on the level of gene activity but on the level of protein synthesis. The reason why these temporary changes become chronic in asthma and COPD remains to be studied.

ISSN/ISBN 1424-7860

edoc-URL <http://edoc.unibas.ch/dok/A6007532>

Full Text on edoc No;

Digital Object Identifier DOI smw-12366

PubMed ID <http://www.ncbi.nlm.nih.gov/pubmed/20458646>

Document type (ISI) Journal Article, Review