

Abstract

The airway epithelial cells is strategically positioned at the interface with environment, and thus plays a key role in host defence system. Epithelial cells do not provide only a mechanical barrier against the influence of potentially harmful substances, but these cells are metabolically very active with an extensive secretory activity. Epithelial cells generate a large number of cytokines, especially chemokines (eg. IL-8, TSLP, RANTES), antimicrobial peptides in response to variety of stimuli eg. lipopolysaccharide. Epithelial cells are involved in the balance of Th1/Th2/Th17 cells. Another relevance of epithelial cell is, that they amplify inflammatory processes and activity of effector cells by inflammatory cytokines. Substantial new evidence indicates an importance of epithelial cells in their direction of recruitment immunity cells to the site of damage and they are involved in the reparation processes. Disorder of these cytokine regulations can be implicated in the development of diverse lung diseases such as eg. asthma or chronic obstructive pulmonary disease. Hence this field is intensively studying, so that could be find new targets of possible therapeutic interventions.