

Special Issue

Molecular Mechanism and Treatment of Allergic Asthma

Message from the Guest Editors

Epithelial barrier damage plays a central role in the development and maintenance of allergic inflammation. The rise in airways epithelial barrier permeability alters tissue homeostasis and allows allergen and other external agents penetration. Different mechanisms contribute to barrier damage such as eosinophilic infiltrate and allergenic proteases. Eosinophils secrete several cationic proteins that induce epithelial damage while different allergens display a proteolytic activity. The protease allergens degrade junctional proteins of airway epithelium allowing allergen penetration and uptake by antigen-presenting cells, alarmins and type 2 cytokines release, causing the main symptoms of skin, sino-nasal and bronchial diseases.

We aim to highlight the molecular mechanisms underlying allergenic proteases-induced epithelial barrier damage and the role of immune response in allergic asthma onset, maintenance and progression.

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