



Ion Channels in Healthy and Diseased Respiratory Epithelia

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Deadline for manuscript
submissions:

closed (20 November 2021)

Message from the Guest Editors

Respiratory epithelia serve a variety of highly important functions. One of the diverse duties represents the first line of protection against the invasion by bacteria, microbes, viruses and other harmful substances in the inhaled air. The mucus lining the outer surface of respiratory epithelia usually traps the potential invaders and transports them, together with other particles, to the pharynx, driven by the constant concerted beating of the epithelial cilia. Mucus production, its ion and water composition (thus determining mucus viscosity), ciliary beating and coordination of the concerted beating are driven by the action and the interplay of a whole orchestra of ion channels in respiratory epithelia. Malfunctions of one or more ion channels or the interception of the intracellular signal cascades regulating the concerted interplay of those channels lead to severe diseases having dramatic health effects, and eventually lead to the death of patients.

We encourage scientists from all fields to contribute to enlightening the role of respiratory epithelial ion channels, from molecule to malady.





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