

## Special Issue

# Molecular Mechanisms and Therapeutic Potential of Ion Channels in Human Diseases

### Message from the Guest Editors

Ion channels are transmembrane proteins that play a fundamental role in the rapid signaling of biological membranes. They have evolved to mediate the rapid passage of ion species, exploiting their electrochemical gradient, to carry out various biological functions, including the genesis and propagation of nerve impulses, muscle contraction, the release of signaling molecules, cell proliferation, differentiation, migration, and death. Both loss- or gain-of-function mutations in ion channels lead to human hereditary diseases, including cystic fibrosis, malignant hyperthermia, central core disease, cerebellar ataxia, tubular aggregate myopathy, Stormorken disease, etc. In addition, the altered expression and function of unmutated ion channels also indirectly contributes to or amplifies the pathogenesis of specific diseases.

For this Special Issue, we invite papers focused on the ion channels in human diseases, with a particular emphasis on the mechanism by which the altered function/expression of ion channels impacts the disease phenotype. Data on a possible use of ion channel modulators as new therapeutic strategies are also welcome.

### Guest Editors

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### Deadline for manuscript submissions

closed (20 November 2024)



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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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### Editor-in-Chief

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