



## Actions of Small Molecules on Varying Type of Membrane Ion Channels

Guest Editor:

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### Message from the Guest Editor

Ion channels, viewed as enigmatic proteins, are recognized to select ions to pass through the cell membrane in a wide variety of cells. Changes in these various types of ion channels can act to perturb the functional activities of Na<sup>+</sup>, Ca<sup>2+</sup>, and K<sup>+</sup> channels, and therefore play essential roles in numerous fundamental physiological functions, such as controlling membrane excitability, generating and shaping action potentials, regulating cell volume, and regulating epithelial secretion. Recent progress in the biophysical or pharmacological characterization of ion channels potentially modified by different small molecules (i.e., ion channel modulators) has demonstrated the fundamental importance of ion channels in physiology, pathophysiology, pharmacology, and various pathological disorders. However, the potential of these small-molecule modulators as targets for novel and efficacious therapeutics is still incompletely understood. It is hoped that this Special Issue in Biomedicines will provide the current understanding of several intriguing small molecules which can effectively perturb the amplitude, gating kinetics, and voltage-dependent hysteresis of membrane ionic currents.





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