

Special Issue

Molecular Mechanisms of Voltage-Gating and Modulation in Ion Channels

Message from the Guest Editor

Voltage-gated ion channels are membrane proteins whose activity directly modifies the membrane potential of cells by allowing for a selective ion flow across the cell membrane. These ion channels have their activity (open/close probability) modulated by the cell membrane's potential. In this fashion, voltage-gated ion channels participate in a very short loop of mechanistic feedback, in that the ion current that they generate instantly changes the membrane potential, which, in turn, directly modulates the channels' activity through their own built-in voltage sensors. Many aspects of these channels' voltage sensitivities, coupling, and modulation are still only partially understood or are yet to be discovered. Intramolecular and intermolecular mechanisms involving these channels are yet to be unveiled and framed as drug targets for research and development, as well as for potential therapeutics. This Special Issue is led by Dr. Joao Luis Carvalho de Souza as and assisted by Dr. Carlos Bassetto from UTSA.

Guest Editor

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Deadline for manuscript submissions

closed (31 January 2026)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



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*International Journal of
Molecular Sciences*
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