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Ca²⁺, Na⁺, and K⁺ Homeostasis and Signaling in Brain Development and Neurological Diseases

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submissions:
closed (15 August 2022)

Message from the Guest Editor

Dear Colleagues,

This Special Issue of *Cells* aims to gather collaborative efforts by several authors and reviewers to provide a collection of literature on the role played by calcium (Ca²⁺), sodium (Na⁺), and potassium (K⁺) in brain development and the etiopathogenesis of neurological diseases. This topic is currently extremely important since the regulation of ionic homeostasis is crucial for many neuronal functions. Ion gradients provide the driving force for important intra- and inter-cellular communications within neuronal networks. Na⁺ entry into neurons is crucial for triggering and the propagation of action potentials, whereas Ca²⁺ signaling is involved in neurotransmitter release, synaptic plasticity processes, gene expression, and other fundamental neuronal functions. The efflux of K⁺ ions through specific channels mediates the repolarization of membrane potential following depolarization. Growing evidence indicates that perturbation of ionic homeostasis is the primary signal that something is dysfunctional or diverging from normal physiology conditions.



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Special Issue



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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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