



Biological Rhythms and Molecular Clockworks in Physiology and Pathology

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Message from the Guest Editors

Dear Colleagues,

In every single cell, a biological clock goes on ticking and the set of oscillations of the single cells is responsible for the rhythmic tissue function. Harmonized biological rhythms are apparent in numerous facets of our physiology, managed by the internal timing system known as circadian clock circuitry. Circadian desynchrony, i.e., loss of resonance between body rhythmicity and environmental cues cycles, and alterations in the rhythms of each single tissue critically contribute to the mechanisms implicated in metabolic, neoplastic, infectious, immune-inflammatory and neurodegenerative diseases.

In this Special Issue in Biology, we will bring together articles dealing with the numerous and various aspects of up-to-date scientific research on multi-frequency biological rhythms in cells, animal models and humans, in order to promote an increasingly in-depth knowledge of the molecular processes underlying the rhythmicity of cell processes, intracellular signaling and tissue functions as well as their rhythmic regulation through circadian clock circuitry, both in physiological and pathological conditions.

Guest Editors





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Message from the Editorial Board

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