



Biological Rhythms and Molecular Clockworks in Physiology and Pathology

Guest Editors:

**Prof. Dr. Gianluigi Ubaldo
Mazzoccoli**

Division of Internal Medicine and
Chronobiology Laboratory,
Department of Medical Sciences,
IRCCS “Casa Sollievo della
Sofferenza”, Opera di Padre Pio
da Pietrelcina, Cappuccini
Avenue, 71013 San Giovanni
Rotondo, Italy

Dr. Marina Maria Bellet

Department of Medicine and
Surgery, University of Perugia,
06132 Perugia, Italy

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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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Editors-in-Chief

Prof. Dr. Jukka Finne

Research Programme in
Molecular and Integrative
Biosciences, Faculty of Biological
and Environmental Sciences,
University of Helsinki, P.O. Box
56, FI-00014 Helsinki, Finland

Prof. Dr. Andrés Moya

Integrative Systems Biology
Institute, University of Valencia
and CSIC, 46980 Valencia, Spain

Message from the Editorial Board

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Biology Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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