



an Open Access Journal by MDPI

## Role of Melatonin in Health and Disease

Guest Editor:

### Dr. Laura López-Pingarrón

Department of Pharmacology,  
Physiology, Legal and Forensic  
Medicine, University of Zaragoza.  
Calle Domingo Miral s/n, 50009  
Zaragoza, Spain

Deadline for manuscript  
submissions:

**closed (31 March 2023)**

### Message from the Guest Editor

Synthesized melatonin, with circadian rhythmicity by the pineal gland, and by other tissues in humans, is fundamentally known as a regulator of the wake-sleep cycle, and for its antioxidant capacity, by purifying free radicals generated in oxidative stress reactions. In addition to jet lag, due to its physiological decrease with age, melatonin is used to prevent processes derived from aging. It is an essential molecule in the treatment of diseases related to chronodisruption, such as accelerated aging; sleep and mood disorders; cognitive impairment, due to its neuroprotective capacity; metabolic syndrome; cardiovascular diseases; some types of cancer. Due to its function, not only antioxidant, but also anti-inflammatory and immunomodulatory, its therapeutic indications are expanding at the level of transplant medicine. Recently, the use of melatonin in infections such as that caused by COVID-19 has been proposed. As a result of its broad physiological actions and its potential beneficial effects, together with its high bioavailability and little or no toxicity, melatonin has been proposed as a safe and effective treatment for numerous diseases.



[mdpi.com/si/118341](https://mdpi.com/si/118341)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Felipe Fregni

1. Neuromodulation Center and  
Center for Clinical Research  
Learning, Spaulding  
Rehabilitation Hospital and  
Massachusetts General Hospital,  
Harvard Medical School, Boston,  
MA 02114, USA  
2. Department of Epidemiology,  
Harvard T.H. Chan School of  
Public Health, Boston, MA 02115,  
USA

## Message from the Editor-in-Chief

*Biomedicines* (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within *Scopus*, *SCIE (Web of Science)*, *PubMed*, *PMC*, *CAPLus / SciFinder*, and other databases.

**Journal Rank:** JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q1 (Medicine (miscellaneous))

## Contact Us

*Biomedicines* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/biomedicines](https://mdpi.com/journal/biomedicines)  
[biomedicines@mdpi.com](mailto:biomedicines@mdpi.com)  
[X@Biomed\\_MDPI](https://twitter.com/Biomed_MDPI)