Special Issue

Circadian Mechanisms in Synaptic Plasticity

Message from the Guest Editor

Sleep is widely considered to play an important role in brain plasticity. Nevertheless, there are contradictory findings in the field, and there is no single universally accepted theory that explains this putative sleep function. One contributing factor to this impasse may be the influence of biological clocks. There is accumulating evidence that biological clocks (central and peripheral) independently alter synapse number, morphology, enzymatic activity, and strength. Therefore, some changes in synapses ascribed to sleep may in fact be caused by biological clocks. A more complete understanding of brain plasticity requires that the effects of experience, brain state, and circadian rhythms are better defined. In this Special Issue, we invite submissions addressing how circadian rhythms influence brain plasticity, or processes dependent upon brain plasticity (*e.g.,* learning and memory, and neurodevelopment). We also encourage submissions aimed at elucidating how brain states, experience, and clocks work together to produce adaptive plastic changes in the brain.

Guest Editor

Prof. Dr. Marcos G. G. Frank

Washington State University-Spokane, Sleep and Performance Research Center, College of Medical Sciences, Pharmaceutical and Biomedical Sciences Building 213, 412 E Spokane Falls Blvd., Spokane, WA 99202, USA

Deadline for manuscript submissions

closed (30 June 2020)

Clocks & Sleep

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 4.2
Indexed in PubMed

mdpi.com/si/19602

Clocks & Sleep
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
clockssleep@mdpi.com

mdpi.com/journal/clockssleep

Clocks & Sleep

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 4.2
Indexed in PubMed

mdpi.com/journal/clockssleep

MDPI

About the Journal

Message from the Editorial Board

Editors-in-Chief

Prof. Dr. Christian Cajochen
Psychiatric Hospital of the University of Basel, Centre for Chronobiology, Wilhelm-Kleinstr. 27, CH-4002 Basel, Switzerland
Prof. Dr. Paul Franken
Center for Integrative Genomics, University of Lausanne, 1015 Lausanne, Switzerland

Author Benefits

High visibility:

indexed within Scopus, ESCI (Web of Science), PubMed, PMC, FSTA, and other databases.

Journal Rank:

CiteScore - Q2 (Neuroscience (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 27.8 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the second half of 2025).