Special Issue

Cyclic Nucleotide Phosphodiesterases (PDEs)—from Basic Insights to Structure, Physiologic Roles and Drug Development

Message from the Guest Editor

The second messengers cAMP and cGMP transduce the action of a plethora of extracellular signals, ranging from hormones and neurotransmitters to proton gradients and light, into the most diverse cellular and physiologic responses, including vision, memory, cognition, or growth. It is now appreciated that PDEs do not simply serve to terminate cyclic nucleotide signals. PDEs finetune cyclic nucleotide gradients across the cell and are vital for the generation of subcellular compartments or microdomains of cyclic nucleotide signalling. Given the broad range of physiologic and pathophysiologic paradigms affected by cyclic nucleotide signalling, PDEs have also been recognized as promising drug targets, thus further heightening interest in these enzymes.

This Special Issue welcomes original research, short communications, and review manuscripts broadly related to the structure or compartmentalization of PDEs, their cellular, physiologic, and pathophysiologic roles, and the development of PDE inhibitors as therapeutics.

Guest Editor

Dr. Wito Richter

Department of Biochemistry & Molecular Biology and Center for Lung Biology, Whiddon College of Medicine, University of South Alabama, Mobile, AL 36688, USA

Deadline for manuscript submissions

closed (15 September 2021)

Biology

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed

mdpi.com/si/70584

Biology
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biology@mdpi.com

mdpi.com/journal/biology

Biology

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed

mdpi.com/journal/biology

About the Journal

Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biology) / CiteScore - Q1 (General Agricultural and Biological Sciences)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.4 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the first half of 2025).

MDPI