



cells



an Open Access Journal by MDPI

From Research on Vitamin B3, NAD⁺ and ADP-Ribose Metabolism to Clinical Applications in Human Health

Guest Editors:

Prof. Dr. Michael O. Hottiger

Department of Molecular
Mechanisms of Disease,
University of Zurich, Zurich,
Switzerland

Dr. Michael S. Cohen

Department of Chemical
Physiology and Biochemistry,
Oregon Health & Science
University, Portland, USA

Deadline for manuscript
submissions:

closed (15 October 2023)

Message from the Guest Editors

In the 1960s, a paradigm shift in the NAD⁺ field occurred when it was shown that an enzyme (now known as PARP1) cleaves the glycosidic bond of NAD⁺, transfers the ADP-ribose group to amino acid side chains, and forms polymers of ADP-ribose. Fast forward to today, we now know that multiple classes of NAD⁺-consuming enzymes exist, including PARPs (17 in humans) and other ADP-ribosyltransferases, cyclic ADP-ribose synthases, and NAD⁺-dependent protein deacetylases which are involved in fundamental processes affecting health and disease. While much focus of current research is on protein acceptors, DNA, RNA, and NAD itself have been identified as acceptors.

This Special Issue honors Myron (Mike) and Elaine Jacobson, who made an indelible imprint on the NAD⁺ field: from our understanding of NAD⁺ homeostasis and ADP-ribosylation to developing novel NAD⁺ precursors for the treatment of human diseases. The aim of this Special Issue is to summarize our current knowledge on the synthesis, biological, and functional roles of NAD⁺ and its metabolites and how they are clinically applied for human health.



mdpi.com/si/95094

Special Issue



cells



an Open Access Journal by MDPI

Editors-in-Chief

Dr. Alexander E. Kalyuzhny

Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch

Biotech Research & Innovation Centre, The University of Copenhagen, Copenhagen, Denmark

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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](#), [MEDLINE](#), [PMC](#), [CAPlus / SciFinder](#), and [other databases](#).

Journal Rank: JCR - Q2 (Cell Biology) / CiteScore - Q1 (General Biochemistry, Genetics and Molecular Biology)

Contact Us

Cells Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/cells
cells@mdpi.com
[X@Cells_MDPI](#)