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

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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.

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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.

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