

## Special Issue

# From Research on Vitamin B3, NAD<sup>+</sup> and ADP-Ribose Metabolism to Clinical Applications in Human Health

### Message from the Guest Editors

In the 1960s, a paradigm shift in the NAD<sup>+</sup> field occurred when it was shown that an enzyme (now known as PARP1) cleaves the glycosidic bond of NAD<sup>+</sup>, 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<sup>+</sup>-consuming enzymes exist, including PARPs (17 in humans) and other ADP-ribosyltransferases, cyclic ADP-ribose synthases, and NAD<sup>+</sup>-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<sup>+</sup> field: from our understanding of NAD<sup>+</sup> homeostasis and ADP-ribosylation to developing novel NAD<sup>+</sup> 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<sup>+</sup> and its metabolites and how they are clinically applied for human health.

### Guest Editors

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### Deadline for manuscript submissions

closed (15 October 2023)



## Cells

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