



Advances in D-amino Acids Research: New Insight in Physiology, Metabolism and Applications

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Deadline for manuscript
submissions:

closed (15 December 2023)

Message from the Guest Editors

D-amino acids (D-AAs) were long considered to be “the wrong isoform”, i.e., they were taken to be non-functional or even absent in living organisms, with the exception of bacteria. Over the last few decades, however, they were found to be widely distributed in plants, invertebrates, and vertebrates including humans, and have since been acknowledged to play a role in several key biological processes. Moreover, accumulated evidence of their physiological functions and metabolic pathways has led to a keen, renewed interest in their study.

D-AAs are fundamental in microbial physiology as key constituents of the peptidoglycan layer. In mammals, D-serine, D-aspartate, and D-alanine represent the most abundant D-AAs in neuroendocrine and endocrine tissues and, due to their contribution to neurotransmission, the most studied ones. The aim of this Special Issue is to catalyze the interest of people working in the field and publish their recent research. Potential topics include recent research into D-AAs, their biological roles in different organisms, their metabolism, their involvement in pathologies, and their use as biomarkers.





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Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

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