

Special Collection

“Physiology and pathophysiology of D-amino acids”

Published in Wiley journals ChemBioChem, Chemistry – A European Journal, ChemMedChem, and the European Journal of Organic Chemistry.

Invitation to the special issue focusing on physiology and pathophysiology of D-amino acids and related compounds.

To Participants of IDAR 2024 Conference:

ChemBioChem and its Chemistry Europe sister journals Chemistry – A European Journal, ChemMedChem, and the European Journal of Organic Chemistry will be publishing a special collection featuring highlights of the IDAR2024 conference.

TITLE of the special collection “Physiology and pathophysiology of D-amino acids”.

SCOPE: The homochirality of the L-amino acids is essential for the development and maintenance of life. D-Amino acids, enantiomers of L-amino acids, are now being reported in the free form as well as in the bound form in peptides, and proteins. Free D-amino acids play important roles in a number of physiological functions. The enzymes related to the synthesis and metabolism of these D-amino acids present in our living systems. In peptides, D-amino acids are well known as essential amino acid residues of opioid peptides. In proteins, D-aspartate residues increase during aging and they may be a cause of the age-related diseases such as cataract and Alzheimer's diseases. The studies of D-amino acids have been accomplished by the recent improvements in analysis of amino acid enantiomers, which now enable us to detect them even at femtomole levels. D-Amino acids are no longer “unnatural” amino acids. The special collection of D-amino acids in the living organisms will include reviews, overviews and the latest research related to their presence, formation, transport, and degradation. Free D-amino acids including D-serine, D-glutamate, D-aspartate, less common D-amino acids, and the presence of D-amino acids in peptides and proteins will be explored, including their

impact on kidney disease, mental health, microbial diversity in a range of organisms. The latest approaches for their measurements and visualization are also highlighted. We hope that the scientists of life science, chemistry, medicine, pharmacology, agriculture, food chemistry, and computational science who specialize in D-amino acid research, will contribute to this special collection. Especially, we look forward to receiving articles of the invited speakers of IDAR 2024.

Authors will be invited by ChemBioChem but could choose to submit to one of the other journals as well (interested authors would respond to the email with their preferred journal and can then receive an invitation from one of the other journals; so it is up to the authors to decide which journal they want to choose).

We are welcoming contributions of all types, but the submission of your next high-impact research article is particularly encouraged. Review-type articles are also very welcome; please contact us with a rough outline of the proposed topic should you be interested in writing such an article. Please note that manuscripts intended for the Special Collection will be subject to the same high level of peer-review scrutiny as applied to all material submitted to ChemBioChem and its sister titles.

The submission period: from 1 December, 2024 to 28 February, 2025.

Sincerely,

Guest editors of the special issue:

Kenji Hamase, Hisashi Mori, Yasunori Iwata, Shouji Takahashi, Tohru Yoshimura,
Yasuhisa Asano