

Special Issue

Symmetry and Asymmetry in Medicinal Chemistry

Message from the Guest Editor

Symmetry, and, on the other hand, asymmetry (chirality), is one of the most important phenomena in nature, causing the uniqueness of life and life processes. Chirality is caused by a so-called chirality element in the structure of a molecule, which can be center (chiral atom), axis (with limited rotation around a simple bond), or plane. Any organism can be considered a chiral environment, and due to this phenomenon, it is possible to specifically influence the binding of biologically active compounds to their target sites, if their effect depends on the specific binding to the target organ. The effect of diastereoisomers and even individual enantiomers can be completely different or even toxic. For this reason, in the last few decades, increased attention has been paid to the investigation of these optically active forms both in terms of binding to target sites and the detailed knowledge of the mechanism of action, including the structure of target sites and pharmacokinetic profile, i.e., bioavailability for target sites and affinity for metabolism at the formation of potentially toxic chiral metabolites...

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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