

Special Issue

Toxicity of Animal Venoms and the Components: Molecular Mechanisms of Action

Message from the Guest Editor

Animal venoms represent a vast and chemically diverse arsenal of biologically active molecules evolved for predation, defence, and competition. This Special Issue brings together cutting-edge research and reviews that deepen our understanding of the molecular mechanisms underlying venom toxicity. Contributions span a wide range of venomous taxa and highlight the biochemical complexity of venom components, such as proteins, peptides, and small-molecule toxins. The studies featured here explore the interaction of venom molecules with cellular targets, such as ion channels, receptors, and other biological molecules. These interactions lead to a variety of effects, including cytotoxic, neurotoxic, hemotoxic, or immunomodulatory effects. In addition to mechanistic insights, this issue also covers evolutionary perspectives, structure-function relationships, and emerging biotechnological applications of venom-derived compounds in drug discovery and therapeutic development. This Special Issue advances our understanding of toxin biology and inspires the translation of venom research into medical and scientific innovations.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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