

## 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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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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