



*toxins*



an Open Access Journal by MDPI

## Animal Toxins: Biodiscovery, Mechanistic Insights and Translational Potential

Guest Editors:

**Dr. Tim Lüddecke**

Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Animal Venomics Research Group, Ohlebergsweg.12, 35392 Gießen, Germany

**Dr. Simon Blank**

Center of Allergy and Environment (ZAUM), Technical University of Munich, Faculty of Medicine and Helmholtz Center Munich, German Research Center for Environmental Health, D-85764 Munich, Germany

Deadline for manuscript submissions:

**closed (30 November 2023)**

### Message from the Guest Editors

Dear Colleagues,

Animal toxins are evolutionarily refined molecular weapons with tremendous translational potential. However, only a subset of all venomous and poisonous animals has been investigated thus far and, accordingly, the vast majority of biomolecules present in these remain to be discovered.

This Special Issue aims to serve as a collection of excellent contributions on animal toxin biodiscovery, function and applications. It seeks to pioneer biodiscovery across the animal kingdom, providing important insights into the bioactivities and mechanistic foundations of hitherto understudied compounds and promoting their translational use. It therefore welcomes experimental studies and review articles that employ state-of-the-art technologies (e.g., genomics, proteomics or metabolomics) in uncovering novel biomolecules from venoms and poisons. It will also feature works that investigate the mode of action, structure–function relationships and effects of chemical modification on toxin bioactivity as well as studies that explore the translational potential of animal toxins in biomedicine, industrial production and agronomy.



[mdpi.com/si/128715](https://mdpi.com/si/128715)

**Special** *Issue*



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Jay Fox

Department of Microbiology,  
University of Virginia,  
Charlottesville, VA, USA

## Message from the Editor-in-Chief

Toxinology is an incredibly diverse area of study, ranging from field surveys of environmental toxins to the study of toxin action at the molecular level. The editorial board and staff of *Toxins* are dedicated to providing a timely, peer-reviewed outlet for exciting, innovative primary research articles and concise, informative reviews from investigators in the myriad of disciplines contributing to our knowledge on toxins. We are committed to meeting the needs of the toxin research community by offering useful and timely reviews of all manuscripts submitted. Please consider *Toxins* when submitting your work for publication.

## Author Benefits

**Open Access:** free for readers, with **article processing charges (APC)** paid by authors or their institutions.

**High Visibility:** indexed within **Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Embase, CAPlus / SciFinder, AGRIS, and other databases.**

**Journal Rank:** JCR - Q1 (Toxicology) / CiteScore - Q1 (Toxicology)

## Contact Us

---

*Toxins* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/toxins](http://mdpi.com/journal/toxins)  
[toxins@mdpi.com](mailto:toxins@mdpi.com)  
[X@Toxins\\_Mdpi](#)