



## Neurotoxins in the Neurosciences: Molecular Mechanisms and Applications

Guest Editors:

**Prof. Dr. Andreas Wree**

Institute of Anatomy, Rostock  
University Medical Center,  
Gertrudenstrasse 9, 18057  
Rostock, Germany

**Prof. Dr. Björn Spittau**

Department of Anatomy, Rostock  
University Medical Center, 18057  
Rostock, Germany

Deadline for manuscript  
submissions:

**closed (30 November 2019)**

### Message from the Guest Editors

Neurotoxins are substances with very diverse chemical properties and functions, and act by very diverse mechanisms leading to either the disruption or destruction of distinct components within the nervous system, during development or in adulthood. Neurotoxins can be naturally derived or synthetic. Biological neurotoxins, which are effectively used by snakes, fungi and bacteria, differ in terms of the source, binding site and mechanisms of toxic action. According to their very special design and function, they are often used in experimental neuroscience, providing effective means by which certain elements of the nervous system can be accurately and efficiently targeted. As each toxin differs in action and binding site, this specificity can be used to study individual sites of the nervous system. For this reason, neurotoxins are considered excellent tools for understanding the complex nervous system.

In this Special Issue, we ask experts using biological and synthetic neurotoxins in experimental research to contribute manuscripts to increase the understanding of different aspects of neurotoxins.





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Maurizio Battino**

Department of  
Odontostomatologic and  
Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of  
Medicine, Università Politecnica  
delle Marche, Via Ranieri 65,  
60100 Ancona, Italy

## 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.

## 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, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (*Biochemistry & Molecular Biology*) / CiteScore - Q1 (*Inorganic Chemistry*)

## Contact Us

*International Journal of Molecular  
Sciences* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/ijms  
ijms@mdpi.com  
X@IJMS\_MDPI