



*toxins*



an Open Access Journal by MDPI

## Analysis and Evaluation of Tetrodotoxin

Guest Editors:

**Dr. Paz Otero**

Department of Analytical and Food Chemistry, Faculty of Food Science and Technology, University of Vigo, Ourense Campus, 32004 Ourense, Spain

**Prof. Dr. Carmen Vale**

Department of Pharmacology, Pharmacy and Pharmaceutical Technology, Faculty of Veterinary, University of Santiago of Compostela, 27002 Lugo, Spain

Deadline for manuscript submissions:

**closed (31 July 2021)**

### Message from the Guest Editors

Tetrodotoxin (TTX) is a naturally occurring toxin that may contaminate the food chain, inducing neurological symptoms in humans by selective and extracellular binding to receptor-site 1 of voltage-gated sodium channels (Nav). TTX is an extremely potent alkaloid typical of warm ecosystems that, over recent years, has appeared more frequently in countries with temperate waters, including New Zealand, Japan, UK, Netherlands, Greece, Spain, and Italy. TTX and its analogues are not monitored on a regular basis in the EU, and no maximum permitted level has been defined, although concentrations lower than 44 µg of TTX eq/kg of shellfish meat are not expected to harm humans. This Special Issue is focused on the occurrence of TTXs in new areas and in new species, the emerging risks, analytical methods for their detection and quantification, rapid tests for screening, and the in vivo and in vitro toxicology, mode of action, and effects on neuronal function and brain development. Moreover, the chronic effects of low doses of neurotoxins on animal and human health are also of interest.



[mdpi.com/si/44066](https://mdpi.com/si/44066)

# 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, St. Alban-Anlage 66  
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](https://twitter.com/Toxins_Mdpi)