



Neurotoxicity, Immunotoxicity, and Metabolic Dysfunction of Plastic Pollution in Freshwater and Marine Species

Guest Editors:

Dr. Christopher J. Martyniuk

Center for Environmental and Human Toxicology, Department of Physiological Sciences, College of Veterinary Medicine, University of Florida, 2187 Mowry Rd. Bldg. 471, P.O. Box 110885, Gainesville, FL 32611, USA

Dr. Xuefang Liang

School of Ecology and Environment, Inner Mongolia University, Hohhot 010021, China

Deadline for manuscript submissions:

15 January 2025

Message from the Guest Editors

The focus of research has been on the fate, distribution, and toxicity of micro- and nanoplastics in invertebrate and vertebrate species, and several studies have quantified plastics in various tissues of aquatic species. Biological responses to plastic exposure can include oxidative stress, immune dysfunction, metabolic disruption, and other endpoints of toxicity.

This Special Issue will highlight plastic toxicity research conducted in aquatic animal species, with a special emphasis on their neurotoxicology and behavioral effects. Original contributions and reviews that investigate the potentially toxic outcomes of plastic exposure and their additives in invertebrates and vertebrates inhabiting freshwater and marine environments are encouraged. This Special Issue also welcomes any submission focusing on neuronal endpoints in aquatic animal models, in order to better understand how plastic contamination impacts the central nervous system and neurological health. Studies leveraging molecular approaches to discern the mechanisms of neurotoxicity underlying plastics, such as transcriptomics, proteomics, metabolomics, or lipidomics, are encouraged.





toxics



an Open Access Journal by MDPI

Editor-in-Chief

Dr. Demetrio Raldúa

Department Environmental
Chemistry, IDAEA-CSIC, Jordi
Girona 18, 08034 Barcelona,
Spain

Message from the Editor-in-Chief

Toxics (ISSN 2305-6304) is an international, peer-reviewed, open access journal which provides an advanced forum for studies related to all aspects of toxic chemicals and materials. We aim to publish high quality work that furthers our understanding of the exposure, effects, and risks of chemicals and materials in humans and the natural environment as well as approaches to assess and/or manage the toxicological and ecotoxicological risks of chemicals and materials. Please consider publishing in *Toxics* when preparing your next paper.

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](#), [Embase](#), [CAPlus / SciFinder](#), [AGRIS](#), and [other databases](#).

Journal Rank: JCR - Q1 (Toxicology) / CiteScore - Q2 (Chemical Health and Safety)

Contact Us

Toxics Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

mdpi.com/journal/toxics
toxics@mdpi.com
[X@@Toxics_MDPI](#)