

Special Issue

Computational Toxicology: Expanding Frontiers in Risk Assessment

Message from the Guest Editors

Emerging technologies and advances in computational toxicology coupled with an improved understanding of mechanistic adverse outcome pathways (AOPs), in a new era of systems-focused thinking, are radically expanding the frontiers for risk assessment. New approach methodologies (NAMs) are increasingly providing biokinetic and mechanistic data from in vitro assays and in silico predictions that can aid evidence integration. In this Special Issue, we explore this new computational capacity across the source-to-outcome spectrum with examples of specific models and informatics approaches in both the environmental and medical arenas, including strategies for systematic review and harnessing big data. Conceptual constructs as well as quantitative examples are highlighted to illustrate impacts. Cross-cutting challenges such as how to foster the FAIR (findable, accessible, interoperable, and reproducible) principles and management of data repositories are also featured.

Guest Editors

Ms. Annie M. Jarabek

Senior Science Advisor, Human and Environmental Effects Assessment Division (HEEAD), Center for Public Health and Environmental Assessment (CPHEA), Office of Research and Development (ORD), U.S. Environmental Protection Agency (US EPA), North Carolina 27711, USA

Dr. Alicia Paini

Scientific Officer, European Commission - Directorate General Joint Research Centre, Health, Consumers and Reference Materials, Chemicals Safety and Alternative Methods hosting EURL ECVAM

Dr. Peter P. Egeghy

U.S. Environmental Protection Agency, Durham, NC 27709, USA

Deadline for manuscript submissions

closed (30 September 2022)



Toxics

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/69981

Toxics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
toxics@mdpi.com

mdpi.com/journal/

[toxics](https://toxics.mdpi.com)





Toxics

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 6.4
Indexed in PubMed



[mdpi.com/journal/
toxics](https://mdpi.com/journal/toxics)



About the Journal

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.

Editor-in-Chief

Dr. Demetrio Raldúa
Department Environmental Chemistry, IDAEA-CSIC, Jordi Girona 18,
08034 Barcelona, Spain

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q1 (Toxicology) / CiteScore - Q1 (Chemical Health and Safety)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.1 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).