



*toxins*



an Open Access Journal by MDPI

## Pore Forming Proteins: Structure, Function and Applications

Guest Editors:

**Prof. Dr. Bart Hoogenboom**

Dept of Physics & Astronomy,  
UCL, London Centre for  
Nanotechnology, London, UK

**Dr. Michelle Dunstone**

Department of Biochemistry and  
Molecular Biology, Monash  
University, Melbourne 3800,  
Australia

**Dr. Michael Landsberg**

School of Chemistry and  
Molecular Biosciences, University  
of Queensland, Brisbane,  
Australia

Deadline for manuscript  
submissions:  
**closed (31 March 2022)**

### Message from the Guest Editors

Pore-forming proteins are a class of proteins that self-assemble into ring-shaped oligomers and insert into membranes. They typically form a transmembrane channel that can lead to osmotically driven cell lysis or the delivery of toxins. Each pore-forming protein has a specific target or range of target cells, depending on its evolved function.

This Special Issue will explore the function and related mechanisms of pore-forming proteins from the cellular to the atomic level. It will further investigate how pore-forming proteins may be involved in disease, affecting a whole organism, as well as how they insert into cellular membranes by examining the time-resolved details of this process and their function in 4D. Finally, this Special Issue will discuss how pore-forming proteins facilitate the translocation of peptides and other solutes across membranes. An important topic of interest will be the established and potential biotechnological applications of pore-forming proteins.



[mdpi.com/si/77856](https://mdpi.com/si/77856)

**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](#)