

Special Issue

Breaking Barriers: The Breakdown of Epithelial Defenses by Pathogens

Message from the Guest Editor

This Special Issue, entitled "**Breaking Barriers: The Breakdown of Epithelial Defenses by Pathogens**", aims to present recent research on any aspect of the **mechanisms by which pathogens interact with, disrupt, or exploit epithelial and endothelial barriers across different organ systems**. Some of its focal points include, but are not limited to, the following:

- **Mechanisms of barrier disruption** by bacterial toxins, viral proteins, and fungal enzymes (e.g., tight junction degradation, endocytosis, transcytosis, apoptosis).
- **Organ-specific and systemic perspectives, including:**
 - Skin and wound-associated infections.
 - Airway epithelium in respiratory infections.
 - Gut epithelium in enteric diseases.
 - Urogenital epithelium in sexually transmitted infections.
 - Ocular and nasal barriers in mucosal pathogen entry.
 - Blood–brain barrier (BBB) disruption in neuroinvasive infections (e.g., meningitis, encephalitis)
- **Pathogen–host signaling** at epithelial and endothelial interfaces.
- **Inflammatory and immune responses** are initiated by epithelial cells upon barrier compromise.
- Role of the microbiota in maintaining or disrupting epithelial barrier homeostasis.

Guest Editor

Dr. Karen Bohmwald

Instituto de Ciencias Biomédicas, Facultad de Ciencias de la Salud,
Universidad Autónoma de Chile, Avenida del Valle Sur 534,
Huechuraba, Santiago 8581151, Chile

Deadline for manuscript submissions

31 December 2025



Microorganisms

an Open Access Journal
by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed



mdpi.com/si/242174

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

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





Microorganisms

an Open Access Journal
by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

Editor-in-Chief

Dr. Nico Jehmlich

Department of Molecular Toxicology, UFZ-Helmholtz Centre for
Environmental Research, 04318 Leipzig, Germany

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Microbiology) / CiteScore - Q1 (Microbiology (medical))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.2 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).