



## Advances in Antibiotic and Drug-Resistance Mechanisms, 2nd Edition

Guest Editors:

**Dr. Thierry Naas**

School of Medicine, University  
Paris Saclay, Hopital de Bicêtre,  
Service de Bactériologie,  
Bâtiment Broca, 3ème étage, 78  
rue du Gal Leclerc, 94275 Le  
Kremlin-Bicêtre, France

**Dr. Saoussen Oueslati**

School of Medicine, University  
Paris Saclay, Hopital de Bicêtre,  
Service de Bactériologie,  
Bâtiment Broca, 3ème étage, 78  
rue du Gal Leclerc, 94275 Le  
Kremlin-Bicêtre, France

Deadline for manuscript  
submissions:

**15 August 2024**

### Message from the Guest Editors

Dear Colleagues,

The discovery of antibiotics has revolutionized medicine by enabling the efficient treatment of many life-threatening bacterial infections. Antimicrobial resistance (AMR) is today universally recognised as a global threat because of the rapid emergence and dissemination of resistant bacteria and genes among humans, animals, and the environment on the global scale and represents a heavy burden for healthcare systems all over the world. The currently estimated global AMR-related mortality rates are substantial, and this is an “ecosystem-related” problem threatening the interplay of human–animal and environmental health (“One Health”).

The aim of this Special Issue is to present the state-of-the-art data on the last-resort antibiotics, either repurposed or novel antibiotics used in human therapy and their associated resistance mechanisms.

Keywords: AMR; novel antibiotics; resistance; mechanisms; diagnostics; One Health; in vitro; in vivo





an Open Access Journal by MDPI

## Editor-in-Chief

### Dr. Nico Jehmlich

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

## 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.

## 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, PubAg, CAPlus / SciFinder, AGRIS, and other databases.

**Journal Rank:** JCR - Q2 (*Microbiology*) / CiteScore - Q2 (*Microbiology*)

## Contact Us

---

*Microorganisms* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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

mdpi.com/journal/microorganisms  
microorganisms@mdpi.com  
X@Micro\_MDPI