

Special Issue

Recent Advances in Efflux Pump Inhibitors and Their Role in Combatting Multidrug Resistance

Message from the Guest Editors

Antibiotic resistance poses an increasing challenge in modern medicine. Efflux pumps play a crucial role in bacterial resistance by expelling antibiotics out of the cells, thereby reducing their efficacy. Efflux pump inhibitors (EPIs) offer a promising solution to counteract this mechanism, enhancing the effectiveness of existing antibiotics. This Special Issue aims to gather the latest research on EPIs, focusing on molecular mechanisms, novel inhibitors, clinical applications, and resistance patterns. Efflux pumps contribute significantly to bacterial multidrug resistance via various mechanisms, including biofilm formation and horizontal gene transfer. Recent studies have highlighted novel EPIs and their potential applications:

- *New Efflux Systems*
- *Biofilm Inhibition*
- *RND Efflux Pump Inhibitors*
- *Clinical Applications*

Research on EPIs remains critical for addressing multidrug-resistant bacterial infections. The findings published in this Special Issue will contribute significantly to the development of new therapeutic strategies and the enhancement of antibiotic efficacy.

Guest Editors

Dr. László Orosz

Department of Medical Microbiology, Albert Szent-Györgyi Medical School, University of Szeged, Semmelweis utca 6, 6725 Szeged, Hungary

Dr. Spengler Gabriella

Department of Medical Microbiology and Immunobiology, University of Szeged, Dóm Square 10, H-6720 Szeged, Hungary

Deadline for manuscript submissions

31 December 2025



Antibiotics

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed



mdpi.com/si/211060

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

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





Antibiotics

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciplines are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

Editor-in-Chief

Prof. Dr. Nicholas Dixon
School of Chemistry and Molecular Bioscience, University of
Wollongong, Wollongong, NSW 2522, Australia

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, and other databases.

Journal Rank:

JCR - Q1 (Infectious Diseases) / CiteScore - Q1 (General Pharmacology, Toxicology and Pharmaceutics)