Special Issue

Research on Beta-Lactamases and Resistance Genes of Gram-Negative Bacteria

Message from the Guest Editor

In the last 20 years, the Gram-negative (GN) bacteria expressing extended spectrum β-lactamases (ESBL), and carbapenemases have become a major threat in the healthcare sector. Many GN bacteria belong to the normal gut microflora of humans and animals that cannot be decolonized by antibiotics or biocides. Because β-lactamases (BL) are generally encoded on mobile plasmids that additionally care for other resistance genes, they can be rapidly exchanged even between less-related GN species. This poses major challenges for microbiological and molecular diagnostics, but also for epidemiological surveillance and antibiotic treatment. In this context, studies are welcome on: - General (biotic and abiotic) factors that favor or inhibit horizontal dissemination - (Vertical) evolution of BL genes and recombination of plasmids and factors involved - Novel detection technologies and approaches for diagnostics - New or improved therapeutic approaches for the treatment of multiresistant GN colonization and infections. Both original research articles and reviews may be submitted for publication in this Special Issue

Guest Editor

Dr. Oliwia Makarewicz
Institite for Infectious Diseases and Infection Control, Jena University Hospital, Jena, Germany

Deadline for manuscript submissions

closed (30 September 2022)

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/93027

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

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

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 disciples 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)

MDPI