



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

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (30 September 2022)**

### Message from the Guest Editor

Dear Colleagues,

In the last 20 years, the Gram-negative (GN) bacteria expressing extended spectrum  $\beta$ -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  $\beta$ -lactamases (BL) are generally encoded on mobile plasmids that additionally carry 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





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## Editor-in-Chief

### Prof. Dr. Nicholas Dixon

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## 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.

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