Special Issue

Resistance of Gram-Negative Bacteria to Last-Resort Antibacterials

Message from the Guest Editor

Infections due to multi-drug-resistant (MDR), extensively drug-resistant (XDR) and pan-drug-resistant (PDR) Gram-negatives are increasing worldwide, forcing clinicians to use last-resort antimicrobials for their management. These salvage treatment options include the few new antibacterials developed recently (e.g., cefiderocol and ceftolozane-tazobactam) and older antibacterials, like polymyxins and tigecycline. Unfortunately, resistance to last-resort agents is also reported, putting in danger their use and making infections due to these pathogens practically untreatable.

The scope of this Special Issue is to update knowledge on resistance of Gram-negative pathogens to last-resort antimicrobials through manuscripts highlighting their epidemiology, resistance mechanisms and genomics, but also manuscripts addressing alternative treatment options or reversal of resistance methods, like combination therapy, phage therapy, antimicrobial peptides, CRISPR-cas system and PK/PD studies. Finally, manuscripts describing new microbiological tools for resistance detection are also welcome.

Guest Editor

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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/227509

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"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.

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