

Tentative Outline

Special Thematic Issue for Current Topics in Medicinal Chemistry

Antimicrobial Delivery Systems against Drug-Resistant Infections: Recent Advances, Challenges and Future Perspectives

Guest Editor: Dr Zhi Ruan

Aims & Scope:

Antimicrobial resistance has emerged worldwide as a huge challenge to the effective treatment of infectious diseases. The development of new antimicrobial delivery systems can help drugs traverse the cell wall of pathogens and therefore provide a promising solution for addressing this challenge. These carriers include siderophores, antimicrobial peptides, cell penetrating peptides, antibodies, and nanoparticles, which can increase drug bioavailability and site-specific delivery, optimizing therapeutic index and dose-effect relationship. They can also facilitate the access of antimicrobial agents to hard-to-reach locations such as intracellular pathogens or deep dermal infections. This thematic issue is dedicated to explore current significant technical and methodological advancements in the mechanisms, preparation, and characterization of antimicrobial delivery systems, with a focus on the construction, applications, and best-suited approaches for precise and early interventions of drug-resistant infections. We welcome the submission of both original research and review articles focusing on the recent advances and breakthroughs of design, synthesis, and in vitro/in vivo/in silico characterization of antimicrobial delivery systems through various carriers.

Keywords: Drug delivery systems, Targeted delivery, Cytotoxicity, Biocompatibility, Theranostics, Antimicrobial resistance, Nanoparticles.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Structure, function, and characterization of antimicrobial delivery systems
- Theranostic nanoparticulate antimicrobial delivery systems
- Microbial iron transport (siderophore)-mediated antimicrobial delivery systems
- Design of novel drug delivery systems for overcoming antimicrobial resistance
- Technical and methodological advances in the characterization of antimicrobial delivery systems
- Harnessing bioactive compounds to enhance diagnostic and therapeutic performances of drug-resistant infections

Schedule:

- ✧ Manuscript submission deadline: 31 December 2021
- ✧ Peer Review Due: 28 February 2022
- ✧ Revision Due: 31 March 2022
- ✧ Announcement of acceptance by the Guest Editors: 15 April 2022
- ✧ Final manuscripts due: 30 April 2022

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