Special Issue

Sustainable Innovation in Antibiotic Adjuvants: Developing Strategies to Overcome Antibiotic Resistance and Biofilm Infections

Message from the Guest Editors

This Special Issue seeks to explore innovative, sustainable strategies for developing novel antibiotic adjuvants that enhance the effectiveness of existing antibiotics against both antibiotic-resistant pathogens and biofilm-associated infections. With a focus on eco-friendly methodologies, this Special Issue welcomes contributions describing the sustainable synthesis of bioactive compounds from diverse natural sources (plants, microbes, etc.) and cutting-edge synthetic and rational design approaches. Emphasis is placed on studies that elucidate the mechanisms by which these adjuvants disrupt biofilm integrity and overcome resistance pathways, as well as those that investigate the synergistic interactions between adjuvants and conventional antibiotics. By integrating sustainable practices (i.e., green chemistry and life cycle analyses) with advanced medicinal chemistry and translational research, this Special Issue aims to address critical challenges in the treatment of infectious diseases.

Guest Editors

Dr. Anabela Borges

Laboratory for Process Engineering, Environment, Biotechnology and Energy (LEPABE), Department of Chemical Engineering, Faculty of Engineering, University of Porto, 4099-002 Porto, Portugal

Dr. Ana C. Afonso

ALiCE-LEPABE, Department of Chemical and Biological Engineering, Faculty of Engineering, University of Porto, 4200-465 Porto, Portugal

Deadline for manuscript submissions

1 December 2025

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/234226

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