Special Issue

Accelerating the Discovery and Characterization of Antimicrobial Peptides

Message from the Guest Editors

The last decade has witnessed a remarkable increase in the number of alignment-free, machine learning-based approaches for the prediction of antimicrobial peptides. The accuracy of shallow and deep learning methods to discriminate AMPs from non-AMPs has reached 95% or more. Once a sequence is identified as antimicrobial, its specific activity, target pathogen and MIC must be determined. Furthermore, antimicrobial peptides are also able to penetrate cells and activate autophagy in mammalian cells, as well as to modulate the immune system. In summary, the activities embedded within these peptides include anti-viral, anti-fungal, anti-parasite, anti-bacterial, pro-autophagy and immunomodulator. Such multi-functionality imposes the need to further characterize these peptides to evaluate which activities are present, not only out of curiosity, but also as a requirement if these peptides are aimed to be used as pharmaceuticals. This Special Issue of *Antibiotics* invites authors to publish original research including peptide data analysis, methodological aspects of machine learning-based approaches and high-throughput assays intended to achieve the abovementioned goal.

Guest Editors

Dr. Carlos A. Brizuela

Computer Science Department, CICESE Research Center, Ensenada, Baja California 22860, Mexico

Dr. Gabriel Del Río Guerra

Department of Biochemistry and Structural Biology, Instituto de Fisiologia Celular, UNAM, Mexico City 04510, Mexico

Deadline for manuscript submissions

closed (30 June 2023)

Antibiotics

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/101613

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