Special Issue

Genomic Analysis and AMR Detection in Pathogenic Bacteria

Message from the Guest Editors

The investigation of bacterial genomes is challenging. This is particularly true for mechanisms behind antibiotic resistance mechanisms. Multidrug-resistant bacteria are an emergent global disease and a major public health problem. The increasing availability of NGS data has been providing new tools for the detection and typing of pathogens, including the investigation of the molecular basis of antibiotic resistance. This data availability opens up to new “in-silico” methods of analysis as functional genomics, GWAS, machine learning. These techniques have proven to be powerful methods to characterize bacterial features and to predict anti-microbial combinations. However, the performance of any in silico model depends on the quality of the input data. This Special Issue invites articles including, but not limited to, the following topics: functional genomics, methods and algorithms for genome analysis, including machine learning and systems biology approaches; characterization of mobile genetic elements, prophages, pseudogenes, and features conferring resistance to antimicrobials, disinfectants, biocides, chemical and physical stresses.

Guest Editors

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Deadline for manuscript submissions

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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.

Editor-in-Chief

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