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Unlocking Silent Biosynthetic Gene Clusters in Microbes to Accelerate the Discovery of Next Generation of New Antibiotics

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Deadline for manuscript submissions:
closed (10 April 2022)

Message from the Guest Editors

Multidrug-resistant (MDR) bacterial infections have escalated in the community in recent years, even in sterile hospital environments. **Confronted by the loss of the efficacy of existing antibiotic treatments, and the rising incidences of intractable infections and morbidity, there is an urgent need to discover new antibiotic classes not compromised by existing resistance mechanisms**. Microorganisms produce a wealth of structurally diverse, specialised metabolites with a remarkable range of biological activities and a wide variety of applications in antibiotic biodiscovery. Microbial genomes are rich in silent biosynthetic gene clusters (BGCs) encoding defensive agents (i.e., antibiotics) that fail to be expressed under standard laboratory monoculture conditions, presumably due to the paucity of environmental cues. This Special Issue seeks manuscript submissions that introduce new approaches (such as co-cultures and the addition of small molecules) to unlocking these silent genes and discovering new antibiotic candidates.

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Editor-in-Chief

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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.

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