



Synthetic Biology Brings New Opportunity for Antibiotics Discovery

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Message from the Guest Editors

The limited availability of antibiotics, in addition to the rapid emergence of multidrug resistance, are putting us in a very dangerous position. Luckily, the advances of new technologies, especially biotechnologies, such as DNA sequencing, precise genome editing, system metabolic engineering, multiomics, synthetic biology, big data processing, and artificial intelligence are offering a great opportunity to develop better and efficient bioactive molecules, including next-generation antibiotics. Currently, various achievements and new discoveries from both academia and industry are taking place in the broad field of antibiotics, which reflects the fact that a new era is coming. As one of the most important driving forces, academia plays a critical role in drug discovery for a safer society, and thus, we would like to bring academia, industry, and clinic together in this Special Issue to report recent progress in antibiotics discovery.

Key words:

Antimicrobial; Antibiotics; Antivirus; Bioactive natural products; Multidrug resistance; Biosynthesis; Metabolic engineering; Synthetic biology; Advanced biotechnology; Microbial cell factory

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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 disciplines 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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