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Synthetic Biology for Natural Products

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Message from the Guest Editors

Dear Colleagues,

Natural products are especially important targets because of their utility as medicines, flavors, fragrances, and colorants, but can be challenging to obtain due to their low content and structural complexity. Synthetic biology has enabled the tailor-made production of natural products by the fermentation of engineered microorganisms, but it requires much time, effort, and cost to make the strains industrially competitive. Advances in tools and strategies of omics, regulatory circuit rewiring, precise genome editing, in silico metabolic simulation, and high-throughput screening are facilitating the development of high-performance strains. Over the past decade, an increasing number of natural products have been produced and commercialized through applying synthetic biology. These successes represent a burgeoning bio-economy and will open up a new era for the biosynthesis of natural products. In this Special Issue, advances will be presented in the selection of host strains, metabolic pathway reconstruction, tolerance enhancement, and metabolic flux optimization. Reviews and original research articles are both welcome.



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Special Issue



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Message from the Editor-in-Chief

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