Special Issue

Beyond Convention: Novel Sources, Strategies, and Technologies for Researching Fungal Bioactives

Message from the Guest Editors

Fungi represent a vast reservoir of bioactive compounds with unparalleled structural diversity and therapeutic potential, vet they remain underexplored using conventional experimental approaches, which are constrained by cultivability limits, redundant sampling. and technological barriers. This Special Issue, "Beyond Convention: Novel Sources, Strategies, and Technologies for Researching Fungal Bioactives", seeks to overcome these boundaries by spotlighting cuttingedge methodologies that are revolutionizing the field. We welcome contributions that harness unconventional fungal sources-extremophiles, endophytes, lichen symbionts, and unculturable taxa-via metagenomics, alongside transformative technologies such as AI/MLdriven metabolite prediction, CRISPR-based pathway engineering, integrated omics (genome-mining, metabolomics), and advanced analytical platforms (NMR crystallography, IM-MS, microED). Studies may address novel compound discovery, biosynthesis elucidation, heterologous expression, or bioactivity-guided structure optimization.

Guest Editors

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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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