Special Issue

Metabolomic Strategies for Deep Systems Profiling Towards Biomarker Discovery and Precision Medicine

Message from the Guest Editors

Metabolomics provides a comprehensive snapshot of the biochemical landscape, offering precise and dynamic insights into the phenotypic state of biological systems under variable conditions. It contributes to understanding pathogenetic mechanisms and identifying novel biomarkers. Technological advancements, particularly high-resolution mass spectrometry, have broadened analytical capabilities, enabling detection of a wide range of metabolites—even in unconventional samples like tears, sweat, or dried blood spots—and in rare diseases. Metabolomics also complements other omics platforms, offering a more holistic systems biology perspective. These features position metabolomics as a key ally in precision medicine, driving biomarker discovery, defining molecular signatures, identifying therapeutic targets, and enabling treatment monitoring. This Special Issue highlights studies on disease-related metabolomic profiling, innovative analytical strategies, biomarker discovery, and integrative multi-omics approaches.

Guest Editors

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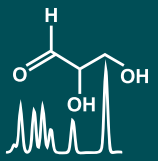

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About the Journal

Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

Editor-in-Chief

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