

## Special Issue

# Integration of Proteomics and Metabolomics: A Comprehensive Approach to Omics Research

### Message from the Guest Editor

The regulatory interplay between metabolism, hub molecules, proteins, and protein modification is known to regulate cellular homeostasis, and alterations can lead to disease development. Cross-omics approaches combining proteomics, metabolomics, and fluxomics are powerful tools to elucidate molecular mechanisms and gain functional insights into cellular homeostasis and pathobiochemical phenotypes. However, combined proteomic and metabolomic analyses remain an analytical challenge. Ideally, metabolite and protein compositions are analyzed simultaneously and are dynamically and spatially resolved. This requires the development of strategies at the level of sample preparation, mass spectrometric acquisition, bioinformatic analysis, computational modelling, and, in particular, data integration. This Special Issue collects papers reporting on the recent developments and applications of innovative approaches in metabolomics, proteomics, and fluxomics, including computational omics, to provide new insights into the molecular aspects of pathophysiology and biochemistry in cellular homeostasis, health, and disease.

### Guest Editor

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## Metabolites

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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.

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### Editor-in-Chief

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