



## Mass Spectrometry Imaging: Theory, Methods and Applications in Biochemical and Pharmaceutical Research

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### Message from the Guest Editor

Mass spectrometry imaging (MSI) has demonstrated great power in terms of its capacity to assess spatial information concerning various types of molecules (metabolites, lipids, glycans, proteins, drugs, nucleotides, metals, etc.) across the whole-body animal, including tissue, organs, plants, bacteria, and single cells. These techniques can even obtain information at a sub-cellular resolution. The scope, depth, and complexity that an MSI system can handle heavily rely on new technical and methodological developments irrespective of sample preprocessing (cleanup, derivatization, digestion, cleavage, labeling), in situ ionization, coupling with various mass analyzers and ion mobility, data science for high-dimensional MSI data processing, multi-modular images registration, high-definition image prediction, and bio-information integration. Therefore, this Special Issue invites scholars to submit research related to MSI theory, methods, and applications in biochemical and pharmaceutical research.





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## 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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