Spatial Metabolomics

Message from the Guest Editors

Metabolomics aims to characterize all the small molecules derived by cellular processes. In particular, studying metabolites and lipids in their native spatial context is at the forefront of metabolomics and lipidomics research. Along these lines, one of the latest challenges in spatial metabolomics is to map metabolites and lipids with cellular and subcellular spatial resolution. Recent instrumental advancements now allow commercial MSI instruments to offer near single-cell lateral resolutions while still having sufficient sensitivity to detect endogenous metabolites and lipids within the micromolar concentration range. Furthermore, the integration of MSI with new separation techniques, can further improve the mass resolution and annotation of isobaric and isomeric species.

This Special Issue “Spatial Metabolomics”, is dedicated to the strategies for investigating spatial metabolomics, and it is open to method development, bioinformatic solutions and concepts, as well as the application of spatial metabolomics to study cell metabolism and to answer biomedical questions.
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.