



Metabolomics-Based Biomarkers for Nutrition and Health

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Message from the Guest Editors

This Special Issue focuses on methodology and applied research in the area of metabolomics-based biomarker discovery, evaluation, validation and application for nutrition and health. With technological advancement, various types of high-dimensional objective measurements such as metabolomics data provide great opportunities to develop biomarkers for nutrition and health outcomes. Recent developments in the area showed the usefulness of metabolomics as biomarkers for dietary intake for various macronutrients and helped study the association between dietary intakes and disease outcomes. Additionally, studies showed that metabolites can be used as biomarkers for an early detection of diseases and predict the risk of developing future diseases. However, there are many remaining gaps to be filled. The high dimensionality of these novel metabolomics data combined with their own measurement uncertainty present noteworthy challenges for statistical analysis in biomarker discovery. The potential heterogeneity in metabolomics platforms and technical variation between labs raised the question of the reliability, reproducibility and generalizability of developed metabolite-based biomarkers.





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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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