

Special Issue on **NUTRIOMICS Studies in Diabetes Research**

CALL FOR PAPERS

Diabetes mellitus is a heterogeneous metabolic disease caused by a combination of genetic and environmental risk factors. Advanced knowledge of diet-gene interactions as well as mechanisms involved in the development and progression of diabetes is the key to achieving effective prevention and therapy.

Although several studies have already discovered significant diet-gene interactions modulating glucose metabolism and being related to diabetes, more evidence-based observations and experiments are needed to clarify their role. The progress in technology and available methodological approaches (including genomics, transcriptomics, proteomics, lipidomics, and metabolomics) create opportunities for a better, holistic understanding of the biological complexity. There is an exceptional potential of OMICS-based nutritional research in the field of diabetes, and despite the discovery of genes associated with diabetes and altered molecules, the particular pathways associating diet with genes, proteins, and metabolites still need to be investigated.

Particularly functional studies, in which nutriomics approaches are used to evaluate the effects of different diets, may predict, estimate, or modulate the risk of diabetes or prevent disease development and progression. In addition, studies comparing protein/metabolic profiles between individuals with different genetic background and different dietary interventions, which can be a part of personalized medicine, are of great value. Currently, the impact of diet on biological pathway regulation is sought, and this knowledge will contribute to better risk prediction, but also more effective personalized dietary recommendations for diabetes prevention and therapy. Therefore, this special issue will welcome original research and review papers studying the impact of nutrition on diabetes prevention, development, progression, and treatment, with the use of an OMICS approaches.

Potential topics include but are not limited to the following:

- ▶ Novel biomarkers and alteration of biochemical pathways in diabetes, which are related to diet
- ▶ Impact of diet on diabetes development, by using holistic approaches
- ▶ Impact of nutrition on gut microbiota and other factors involved in the pathogenesis of diabetes using OMICS approaches
- ▶ Use of OMICS approaches to study the effects of different dietary interventions in the prevention and treatment of diabetes
- ▶ Nutrimeabolomics, nutriproteomics, and nutrilipidomics in diabetes research
- ▶ Nutrigenetics and nutrigenomics insights into the diabetes etiopathogenesis, prevention, and therapy

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=089304>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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