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Nutrigenetics in Disease Prevention: Mechanistic Pathways and Risk Biomarkers

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Message from the Guest Editor

Dear Colleagues,

Nutrition plays a critical role in health and disease. Complex chronic non-communicable diseases (NCDs) are the leading cause of death annually worldwide (estimated ~70% of all deaths). Beyond the personal devastating impact, the direct and indirect NCD-associated burden on healthcare systems and society impedes social, medical, health and economic development. The etiology of NCDs is complex, with both genetic and environmental (nutrition, physical activity) factors contributing to their development and progression.

Numerous studies have shown the potential of nutrition as a key player in the prevention, development, treatment and regression of NCDs. However, the underlying molecular mechanisms are mostly yet to be elucidated through nutrigenetics and nutrigenomics research.

The goal of this Special Issue is to advance our knowledge in topics related to cellular and molecular pathways regulated by dietary components (in vitro and in vivo studies), molecular risk, onset and progression biomarkers (identified through omics or genetic research methodologies), functional genetics and related issues (not microbiome).

Prof. Dr. Ruth Birk
Guest Editor



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Special Issue



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