Special Issue

Obesity and Metabolic Syndrome in Children: Insights, Interventions and Emerging Perspectives

Message from the Guest Editors

Metabolic syndrome in children represents a nuanced continuum intricately woven by various contributing factors, beginning with fetal programming. Genetic predispositions add an additional layer of complexity, influencing susceptibility to metabolic dysregulation. The interplay between specific gene variants may contribute to altered lipid metabolism, insulin resistance, and other hallmarks of metabolic syndrome. Oxidative stress, which is characterized by an imbalance between reactive oxygen species and antioxidant defenses, has emerged as a key mechanistic link. Increased oxidative stress can disrupt cellular function and contribute to the development of insulin resistance and inflammation. Moreover, environmental risk factors, encompassing lifestyle, dietary habits, and exposure to pollutants, further modulate the trajectory of metabolic health in children. Investigating these intricate relationships provides a comprehensive understanding of the origins and progression of metabolic syndrome in pediatric populations, offering valuable insights for targeted interventions and early-life prevention strategies.

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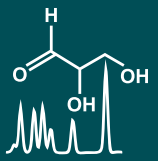

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About the Journal

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.

Editor-in-Chief

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