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Effects and Modulatory Mechanisms of Dietary Flavonoids in Obesity

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Deadline for manuscript submissions: closed (25 September 2024)

Message from the Guest Editors

The epidemic of obesity and accompanying metabolic complications is growing fast worldwide. Obesity is associated with adipose tissue hypertrophy, which refers to the increase in cellular lipid content, and hyperplasia, which depends on differentiation from preadipocytes. Hyperplasia takes place through adipogenesis and involves a cascade of transcriptional factors and cell cycle proteins, leading to the development of mature adipocytes. This process can be divided into three main phases: growth arrest, clonal expansion, and terminal differentiation. The inhibition of adipogenesis occurs when any of these stages are interrupted, which may serve as a potential therapeutic strategy against obesity. Dietary flavonoids have become the subject of increasing scientific interest due to their effects on adipogenesis. Flavonoids have been shown to regulate several pathways and affect a number of molecular targets during specific stages of adipocyte development.

The Special Issue will publish original research articles and reviews related to the effects of dietary flavonoids on adipocyte development, the mechanisms of action, and discussing their implications for human health.



mdpi.com/si/196222







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