



## Spingolipids: Metabolic Functions and Disorders 2.0

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### Message from the Guest Editor

A strong case is emerging that bioactive sphingolipids, although only a minor constituent of the global lipid milieu in cells and tissues, play a central role in regulating metabolic functions. Specific bioactive sphingolipids have been identified as pathogenic mediators in metabolic disorders such as non-alcoholic fatty liver disease (NAFLD), diabetes, or cardiovascular dysfunction. Circulating mediators that are released from adipose tissue (e.g., adipokines, inflammatory cytokines) specifically modulate enzymes that are involved in sphingolipid synthesis and degradation. The accumulation of specific sphingolipid species in tissues such as the liver, muscle, heart, pancreas, and vasculature may contribute to the onset and development of metabolic diseases including insulin resistance, pancreatic  $\beta$ -cell failure, liver dysfunction, neuro-muscular degeneration, cardiomyopathy, and vascular and microenvironmental dysfunctions.





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