

Special Issue

Periphery-Brain Interactions and Leptin in the Regulation of Whole-Body Energy Metabolism

Message from the Guest Editors

Since the seminal discovery of the adipokine leptin in 1994, our understanding of the molecular, cellular and systems bases of whole-body energy metabolism regulation has grown tremendously. However, the incidence of obesity and its comorbidities continue to soar globally.

We now know that peripheral tissues bi-directionally communicate with the central nervous system through various signalling molecules to regulate whole-body energy metabolism. As a recently characterized example, leptin communicates with a chemically defined network of hypothalamic neurons to in turn increase sympathetic nerve activity and innervation of brown and white adipose tissues, thereby promoting thermogenesis and a negative whole-body energy balance.

In this Special Issue, we invite articles that expand our knowledge on periphery-brain interactions. These can include adipokines such as leptin and gut hormones such as glucagon-like peptide 1, but also microbiota products and host-derived metabolites. Articles that shed light on how nutritional, pharmacological, exercise or surgical interventions promote healthier whole-body energy metabolism through periphery-brain interactions are also welcome.

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Deadline for manuscript submissions

closed (5 January 2022)



Nutrients

an Open Access Journal
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Impact Factor 5.0
CiteScore 9.1
Indexed in PubMed



mdpi.com/si/63256

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Message from the Editorial Board

Nutrients is an on-line open access journal that was first published in 2009. *Nutrients* adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of *Nutrients* has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

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