Special Issue

Branched-Chain Amino Acids and Their Metabolites in Health and Disease

Message from the Guest Editor

Branched-chain amino acids (BCAAs; valine, leucine, and isoleucine) are essential amino acids reported to stimulate protein synthesis, attenuate protein breakdown, and regulate cellular signaling pathways. BCAAs and some of their metabolites, particularly, branched-chain keto acids and beta-hydroxy-betamethylbutyrate (HMB), are advocated for therapeutic purposes in a number of disorders, such as liver cirrhosis, renal failure, sepsis, trauma, burn injury, and cancer. Furthermore, BCAAs and HMB are recognized as supplements for athletes and elderly people. However, until today, there have been controversies and differing viewpoints regarding BCAA metabolism in various metabolic states and the suitability of their supplementation in cancer, liver disorders, obesity, and type 2 diabetes mellitus.

The objective of this Special Issue is to bring together these controversies and differing viewpoints to stimulate further research toward their resolutions. We invite investigators to contribute high-quality original and review articles sharing their observations and exchanging ideas on BCAAs and BCAA metabolites to stimulate basic and clinical research in this field.

Guest Editor

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Deadline for manuscript submissions

closed (8 January 2020)



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Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in Biomolecules so far. We would be delighted to welcome you as one of our authors.

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