Special Issue

Regulation of Cellular Metabolism by Nutrient Sensing Pathways

Message from the Guest Editors

In multicellular organisms, fluctuations in nutrient availability can influence an individual cell's metabolic homeostasis. Consequently, it is critical for a cell to be able to perceive its external and internal environment. Cells respond to energy states, macronutrients and micronutrients, and their metabolites. To do this effectively, cells have developed various systems that can sense these various molecules. Modulation of cellular metabolism can be achieved through mechanisms involving receptors, transporters and binding proteins, transcription factors, posttranscriptional regulation, post-translational modifications, feedback regulation of enzyme activity, protein-protein interactions, and nutrient structure. The intent of this Special Issue is to increase our knowledge of specialized sensing mechanisms and associated signaling pathways by which cellular metabolism is regulated in response to nutrients and how these processes contribute to metabolic homeostasis or dysfunction in various cell types.

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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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