Special Issue

Advances in the Understanding of Adipose Tissue Biology and Energy Metabolism, 2nd Edition

Message from the Guest Editor

The adipose tissues can be defined as a multi-depot endocrine organ composed of unilocular white adipocytes forming pads of white adipose tissue (WAT), which mainly functions as energy reservoirs by storing lipids, and the multilocular brown adipocytes that aggregate in specific anatomical locations to constitute discrete depots of brown adipose tissue (BAT) which uses lipids for cold-induced adaptive thermogenesis. It was also found that brite/beige adipocytes with morphofunctional features that allow them to modify the phenotype and thus function differentially based on energy metabolism requirements. The whole organ can be “whitened” when there is a surplus of energy intake or massive browning of it in case of adrenergically drove heat production with increasing energy expenditure for thermoregulation. Furthermore, both WAT and BAT secrete various hormones, cytokines, and metabolites that control systemic energy balance by modulating various neuroendocrine functions acting on the central nervous system as well as in the metabolic activity of peripheral tissues. We aims to gain insight into the molecular mechanisms involved in energy metabolism of adipocytes.

Guest Editor

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