Special Issue

Growth Factor Signalling, Cellular Energy Metabolism and Obesity

Message from the Guest Editor

The insulin/insulin-like growth factor (IGF) signaling pathway is a major signaling pathway that regulates cellular growth and survival. Insulin and IGF-I signal through a complex system of homo- and heterodimeric receptors and binding proteins to activate the phosphoinositid-3-kinase (PI3K)/AKT/mechanistic target of rapamycin (mTOR) pathway. mTOR complex 1 is a nutrient sensing kinase which balances cellular growth with autophagy. There is reciprocal regulation between the mTOR and another energy sensing network, the AMP-activated kinase (AMPK)—Sirtuin 1 axis, which is activated by a low cellular energy status, which negatively regulates mTORC1 activity. In this Special Issue, we will take a closer look at the insulin/IGF-I signaling cascade, its cross-talk with AMPK and Sirtuin1 signaling pathways, pathogenetic changes of this network in obesity, and their impact on cellular energy metabolism in metabolic tissues. Keywords

- insulin
- NAD
- mTOR
- nutrient sensing
- AMPK
- Sirtuin1

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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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