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Regulation of Cell Function by AMPK and Sirtuins: From Basic Research to Disease and Aging

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Message from the Collection Editors

5'-AMP-activated protein kinase, or AMPK, is a multidimensional kinase that acts as an energy sensor, in addition to regulating numerous cellular processes involved in cell survival, health and lifespan. The close partners of AMPK are the sirtuins, a family of evolutionarily conserved NAD⁺-dependent protein deacetylases that are also widely considered to be metabolic sensors.

Both AMPK activity and SIRT1 abundance/activity are reduced with aging, overnutrition or physical inactivity, which may lead to numerous pathologies and diseases, such as diabetes, cancer, inflammation and cardiovascular as well as neurodegenerative diseases.

Authors are invited to submit manuscripts in all areas of current AMPK or sirtuins research, with an emphasis on basic as well as translational aspects. Studies addressing age-related changes in AMPK and sirtuin signaling are explicitly encouraged. This Topical Collection welcomes up-to-date hypotheses, reviews, research articles and short communications. Clinical studies, if relevant, as well as computational modeling are also welcome.



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Topical Collection



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Message from the Editorial Board

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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