Special Issue

The Role of Cell Signaling Pathway Starvation Therapy for Cancer

Message from the Guest Editors

This Special Issue explores cell signaling pathways in starvation therapy, a strategy targeting the oncogenic signaling networks that drive cancer's metabolic reprogramming. Tumors rewire pathways governing nutrient uptake and utilization to fuel growth. Starvation therapy aims to disrupt these signals, cutting off the tumor's nutrient supply. Key approaches include inhibiting glucose transporters/kinases, restricting serine/glycine availability, and blocking glutamine metabolism or lipogenic enzymes. Critically, these interventions not only directly starve cancer cells but also reshape the tumor microenvironment. They can activate immunostimulatory pathways, modulate immune checkpoint expression, and overcome immunosuppression. Advanced delivery systems enhance specificity. While promising, challenges remain, such as tumor heterogeneity, compensatory metabolic pathways, systemic toxicity, and the identification of predictive biomarkers. Future success hinges on optimizing combinatorial strategies, integrating starvation therapy effectively with immunotherapy, targeted agents, and nanotechnology for precise clinical translation.

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About the Journal

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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