Oxidative Medicine and Cellular Longevity

Hindawi

Special Issue on
mTOR Signaling in Cardiometabolic Disease, Cancer, and Aging

CALL FOR PAPERS

The mammalian target of rapamycin (mTOR), an evolutionarily conserved serine/threonine kinase, plays a significant role in integrating cellular and environmental cues that modulate cell metabolism, growth, proliferation, survival, and homeostasis. Distinct roles of mTOR were identified in gene transcription, protein synthesis, tissue regeneration and repair, oxidative stress, immunity, aging, and cell death which include autophagy and apoptosis. Emerging evidence over the last decade indicates that deregulation of mTOR signaling has been implicated in many human diseases, including cancer, obesity, diabetic complications, pulmonary hypertension, cardiovascular diseases, and neurodegeneration. Moreover, oxidative stress has also been etiologically implicated in these wide varieties of disease processes and states. Notably, the mTOR pathway is activated during various cellular processes including tumor formation and angiogenesis, insulin resistance, adipogenesis, and T-lymphocyte activation. Based on its pathophysiological importance, the mTOR signaling pathway has attracted broad scientific and clinical interest as a potential therapeutic target to treat a variety of diseases associated with oxidative stress, aging, proliferative disorders, and metabolic abnormalities.

We invite investigators to contribute original research articles as well as review articles that will advance our understanding of the mTOR signaling pathways in metabolic as well as neurodegenerative diseases, cancer, and aging, which could be pivotal for the development of novel therapeutic strategies to treat many human diseases.

Potential topics include but are not limited to the following:

- Regulation of cellular growth, proliferation and survival by mTOR
- mTOR signaling in diabetes and its vascular complications
- Cardiovascular disease and mTOR pathway
- mTOR signaling in other metabolic disorders
- Regulation of immune system by mTOR
- mTOR signaling in cancer and therapeutic options with mTOR inhibitors
- Involvement of mTOR signaling in neurodegenerative disease
- The role of mTOR signaling in longevity and aging

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/omcl/tors/.

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