Special Issue

Advanced Research in Mitochondrial Medicine and Nanomedicine

Message from the Guest Editor

Mitochondria are central regulators of apoptosis, ATP production, redox balance, mitophagy, and cellular homeostasis. Their dysfunction is implicated in a broad range of conditions, including neurodegenerative disorders (e.g., Alzheimer's and Parkinson's diseases), cancer, metabolic syndromes, and cardiovascular pathologies. In these contexts, precise mitochondrial targeting has the potential to modulate disease pathways at their origin. Nanomedicine offers transformative opportunities to achieve this goal, particularly through the development of advanced delivery systems capable of selectively accumulating in mitochondria. Such systems are paving the way for innovative therapies that integrate mitochondrial biology with cutting-edge nanotechnology. This Special Issue welcomes original research and comprehensive reviews that advance the understanding of mitochondrial medicine and its intersection with nanomedicine. We invite contributions that highlight novel therapeutic targets, innovative delivery platforms, and translational strategies that can bring mitochondria-targeted medicine closer to clinical application.

Guest Editor

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Message from the Editor-in-Chief

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to Biomedicines, be it original research, review articles, or developing Special Issues of current key topics.

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