Special Issue

Cell Cycle in Normal Physiology and Disease

Message from the Guest Editor

In normal physiology, the cell cycle plays a crucial role in embryogenesis, tissue renewal, and immune responses. Its proper regulation allows organisms to adapt to physiological demands, repair damage, and replace senescent cells. However, dysregulation of the cell cycle is a hallmark of numerous diseases, most notably cancer. Aberrant activation of cell cycle components can lead to uncontrolled cell proliferation, genomic instability, and resistance to cell death, all of which contribute to tumor initiation and progression. Additionally, cell cycle anomalies are implicated in other pathological conditions such as neurodegenerative disorders, cardiovascular diseases, and developmental abnormalities. Understanding the mechanisms that govern the cell cycle under normal and pathological conditions is critical for identifying novel therapeutic targets. Advances in cell cycle research have led to the development of CDK inhibitors and other cell cycle-targeted therapies, some of which are now in clinical use. Continued investigation into cell cycle regulation offers the potential to uncover new diagnostic markers and improve treatment strategies for a broad spectrum of diseases.

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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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