

Special Issue

New Insights of Autophagy and Apoptosis in Cells

Message from the Guest Editors

Autophagy and apoptosis are essential cellular processes that maintain cellular homeostasis and respond to stressors, but their intricate interplay and roles in health and disease are still being explored. Autophagy is a catabolic process that involves the degradation and recycling of cellular components, helping cells adapt to nutrient deprivation, eliminate damaged organelles, and regulate inflammation. In contrast, apoptosis is a programmed form of cell death that eliminates damaged or dysfunctional cells to prevent malignancy and maintain tissue integrity. Recent research has revealed new insights into how these two processes are not entirely distinct but rather interconnected, with autophagy acting as a modulator of apoptosis in various cellular contexts. In this Special Issue, we will discuss the molecular mechanisms governing autophagy and apoptosis, and their interactions, to open new therapeutic avenues, including the development of drugs that modulate these pathways for disease prevention and treatment.

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