

## Special Issue

# Molecular Research of Autophagy and Apoptosis

### Message from the Guest Editor

Balance between cell death and survival is of key importance in maintaining cellular homeostasis. Three major types of programmed cell death (PCD) have been distinguished: apoptosis (type I), autophagic cell death (type II), and necrosis (type III), which are interconnected through molecular crosstalk mechanisms.

Characterization of the complex interplay among PCD processes is crucial as it underlies the pathogenesis of multiple diseases, especially cancer.

Recent studies show that apoptosis is a barrier that tumor cells have to overcome in order to survive. Elimination of apoptotic cell debris by phagocytosis is required to prevent inflammation, which is known as a factor that might favour tumor progression. Autophagy, which was originally characterized as a cell survival mechanism in response to starvation but also known as a cell death modulator, may influence the pathological conditions of cancer by altering metabolic conditions.

Further elucidation of basic molecular mechanisms playing a role in PCD processes, furthermore better understanding of their interactions may pave the way for new treatment strategies of cancer.

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