



Apoptosis is a spontaneous apoptotic process in normal cells under physiological and pathological stress. It is a gene-controlled process of programmed cell death (PCD) that can keep the internal environment stable along with cell proliferation. Apoptosis is not a passive but an active process that involves a series of functions, including gene activation, expression, and regulation. Insufficient apoptosis can lead to uncontrolled cell proliferation (i.e., cancer).

Caspases (cysteiny aspartate-specific protease) play a significant role in the process of apoptosis. Research in recent years has indicated the potential of caspases as the target genes for diseases that are caused by excessive apoptosis. In addition, research on small-molecule inhibitors of caspases is currently a hot topic in life sciences.