

Preface

Apoptosis is a prototype of regulated cell death and is executed by sequential activation of proteases called caspases. Once cells undergo apoptosis, dead cells are rapidly engulfed by phagocytes to prevent the release of noxious materials from dying cells. Apoptotic cells or phagocytes engulfing apoptotic cells release various factors that inhibit inflammation, stimulate cell proliferation, or induce the immune tolerance. Thus, apoptosis is believed to play a crucial role in the animal development and tissue homeostasis. Recently, various other types of cell death or non-apoptotic forms of cell death have been identified. They are called necroptosis, pyroptosis, and ferroptosis. These non-apoptotic death processes seem to play an important role in ischemic reperfusion injury, inflammation, and elimination of virus infection. In this book, the current advance of cell death research is discussed.

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