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Titolo	Autophagy: Biology and Diseases [[electronic resource]] : Basic Science / / edited by Zheng-Hong Qin
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Descrizione fisica	1 online resource (xv, 727 pages) : illustrations
Collana	Advances in Experimental Medicine and Biology, , 0065-2598 ; ; 1206
Disciplina	574.87
Soggetti	Molecular biology Cell biology Biochemistry Molecular Medicine Cell Biology Biochemistry, general Citologia Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	History and current status of autophagy research -- Regulation of ATG and autophagy initiation -- Regulation of autophagy by mTOR signaling pathway -- AMPK and autophagy -- Beclin 1, Bcl-2 and autophagy -- TP53, TP53 target genes (DRAM, TIGAR) and autophagy -- Ca(2+) ion and autophagy -- Endoplasmic reticulum stress and autophagy -- Oxidative stress and autophagy -- Noncoding RNAs and atophagy -- Epigenetic regulation of autophagy -- Protein modification and autophagy activation -- Other molecular mechanisms regulating Autophagy -- The role of nanomaterials in autophagy -- Structural basis of autophagy regulatory proteins -- Autophagy and energy metabolism -- Autophagy and lipid metabolism -- Autophagy and the metabolism of misfolding protein -- Autophagy in mitochondrial quality control -- Chaperone-mediated autophagy -- Autophagy in reproduction -- Autophagy in development and differentiation -- Autophagy in normal stem cells and specialized cells -- Autophagy,

aging and longevity -- Autophagy and the ubiquitin-proteasome system -- Immuno-signal and autophagy regulation -- Autophagy and the immune response -- Autophagy and immune tolerance -- Autophagy and cell survival and death -- Coordination of autophagy and other cellular activities.

Sommario/riassunto

This book series consists of 3 volumes covering the basic science (Volume 1), clinical science (Volume 2) and the technology and methodology (Volume 3) of autophagy. Volume 1 focuses on the biology of autophagy, including the signaling pathways, regulating processes and biological functions. Autophagy is a fundamental physiological process in eukaryotic cells. It not only regulates normal cellular homeostasis, and organ development and function, but also plays an important role in the pathogenesis of a wide range of human diseases. Thanks to the rapid development of molecular biology and omic technologies, research on autophagy has boomed in recent decades, and more and more cellular and animal models and state-of the-art technologies are being used to shed light on the complexity of signaling networks involved in the autophagic process. Further, its involvement in biological functions and the pathogenesis of various diseases has attracted increased attention around the globe. Presenting cutting-edge knowledge, this book series is a useful reference resource for researchers and clinicians who are working on or interested in autophagy.