DESCRIPTION

Cellular AGING AND CELL DEATH

Edited by Nikki J. Holbrook, George R. Martin, and Richard A. Lockshin

Cellular Aging and Cell Death provides a thorough understanding of the mechanisms responsible for cellular aging, covering the recent research on programmed cell death and senescence, and describing their role in the control of cell proliferation and the aging process. This one-of-a-kind book is the first to combine the two hottest research areas of cell biology into one comprehensive text.

Leading experts contribute to give readers an authoritative overview of the distinct fields of cellular aging and programmed cell death, as well as to demonstrate how both fields are critical to understanding the aging process. They address the large and growing interest in apoptosis, especially with regard to the molecular signals that induce and regulate programmed cell death, and the role of apoptosis in a variety of age-associated diseases and disabilities. Throughout the book, a strong emphasis is placed on the interrelationship of the molecular, cellular, and physiological aspects of senescence.

Individual chapters discuss such topics as the role and regulation of apoptosis in development, the potential impact of cell death on such postmitotic tissues as nerve and muscle, and suggest that programmed cell death plays an important role in both pathological and nonpathological aspects of aging, including neurodegenerative diseases.
One important chapter focuses on the most recent research involving the study of telomeres, whose reduction in length with age and cell division may underlie cellular senescence. The subject of neuronal cell death is also put into the perspective of aging.

Cellular Aging and Cell Death bridges the rapidly growing fields of cellular aging and programmed cell death. This thorough, yet concise book will be of particular interest to graduate students and researchers within the fields of cell and developmental biology, neurobiology, immunology, and physiology. Physicians and medical students involved in the fields of gerontology and pathology will also find this an informative reference.

ABOUT THE AUTHOR

Nikki J. Holbrook and George R. Martin are the authors of Cellular Aging and Cell Death, published by Wiley.

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