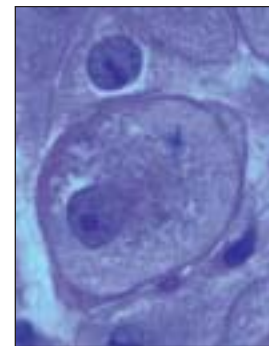


Book Review



Yin Xiao-Ming, Dong Zheng, eds. *Essentials of Apoptosis: A Guide for Basic and Clinical Research*. Totowa, New Jersey: Humana Press Inc; 2003. 272 pages. Hardcover, \$89.50 US.

Published by Humana Press in 2003, *Essentials of Apoptosis: A Guide for Basic and Clinical Research* is a reference volume of 16 review papers dedicated to covering various aspects of the field of programmed cell death or apoptosis.

The review articles range from mechanistic studies and detailed analysis of apoptosis in pathology to techniques of apoptosis analysis. This 272-page volume is divided into three distinct sections. Part I is "Molecules and Pathways of Apoptosis," which covers the various pathways of apoptotic signaling and includes discussions of other, "less classic" programmed cell death pathways. Part II is "Apoptosis in Action," which discusses programmed cell death in organisms and in human diseases. Part III is "Approaches to the Study of Apoptosis," which contains a comprehensive review of apoptosis analysis techniques. Overall, this book is an excellent text that would serve the needs of researchers who are entering into the field of apoptosis.

For the novice, this volume offers several well-presented review articles that provide a solid understanding of programmed cell death and techniques of apoptosis investigation. Part I of the book is likely to be the most useful to newcomers to the field of apoptosis; the large variety of apoptotic mechanisms are examined in detail in this section. Each of the first seven reviews covers a particular aspect of the apoptotic pathways, including discussions on structural biology and alternate programmed cell death pathways independent of caspases. Review #16 describes in detail the assays commonly used to investigate apoptosis from trypan blue staining (a more generic cell death assay) to DNA fragmentation analysis (an apoptosis-specific assay). Researchers experienced in the study of apoptosis will probably not derive as much new information from these reviews as the newcomers but may find them useful as references.

For experienced apoptosis researchers, the most useful part will probably be Section II, which contains

reviews demonstrating apoptosis in organisms and in pathology. This section contains a description of the interaction of apoptosis-inducing stimuli and other cellular death events (eg, necrosis) in the model organisms *Caenorhabditis elegans* and *Drosophila*, including discussions of the little-described apoptosis in bacteria. Further reviews cover apoptosis in disease including cancer, neurodegenerative diseases, and ischemic disease. Pathologies commonly viewed as necrotic (eg, ischemia) are revealed to also have apoptotic characteristics in conjunction with necrotic characteristics. While there is some repetition with the first section of the book, the reviews themselves are comprehensive and well presented.

In conclusion, this book is a well-written and thorough volume concerning apoptosis. The presentation of each different aspect of the pathways, how those pathways manifest themselves in organisms and in pathology, and practical techniques to analyze apoptosis are all useful topics to researchers entering the field and could serve as a refresher for researchers currently in the field. As such, any apoptosis researcher would probably derive useful information from this book and should take time to examine it.

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