Table of Contents

Apoptosis, Senescence and Cancer  Section I: Apoptosis and Alternative Models of Cell Death
Chapter 1. The intrinsic pathway of apoptosis. Scott H. Kaufman
Chapter 2. The extrinsic pathway of apoptosis. M. Stacey Ricci and Wafik S. El-Deiry
Chapter 3. Evaluating the importance of apoptosis and other determinants of cell death and survival. Bradley G. Wouters and Roland K. Chiu
Chapter 4. Mitotic catastrophe. Fiorenza Ianzini and Michael A. Mackey
Chapter 5. Autophagy and autophagic cell death. Mojgan Djavaheri-Mergny, Joelle Botti and Patrice Codogno
Chapter 6. Regulation and function of detachment-induced cell death (anoikis) in cancer progression and metastasis. David J. McConkey and Victor Bondar

Section II. Telomeres and Telomerase, Senescence, Genomic Instability and Tumorigenesis
Chapter 7. Structure and function of the telomere. Jay E. Johnson and Dominique Broccoli
Chapter 8. Overview of Senescence. Ruben D. Ramirez
Chapter 9. Contributions of telomerase to tumorigenesis. Richard Possemato and William C. Hahn
Chapter 10. The role of telomeres in genomic instability. John P. Murane

Section III. DNA Damage Response, Signaling Pathways and Tumorigenesis
Chapter 11. Overview of the DNA damage checkpoint -- ATM and ATR. Aude Dupre and Jean Gautier
Chapter 12. Interactions between myc and cyclin dependent kinase inhibitors in cancer. Kirsteen H. Maclean and John L. Cleveland
Chapter 13. Interplay between H2AX and 53BP1 pathways in DNA double strand break repair response. Fatouros Chronis and Emmy P. Rogakou
Chapter 14. DNA-dependent protein kinase in repair, apoptosis, telomere maintenance and chemotherapy. Lawrence F. Povirk

Section IV. Resistance and Sensitization
Chapter 15. Resistance/signaling pathways. Paul Dent
Chapter 18. The advancement of epidermal growth factor receptor inhibitors in cancer therapy. Gregory W. Allen and Paul M. Harari

Section V. Established Cancer Therapies
Chapter 20. Topoisomerase I poisons and apoptotic topoisomerase I-DNA complexes. Olivier Sordet, Yves Pommier and Eric Solary
Chapter 21. Perturbations of cellular functions by topoisomerase II inhibitors: all roads lead to cell death? Annette K. Larsen and Andrzej Składanowski
Chapter 22. The significance of poly-targeting in apoptosis induction by alkylating agents and platinum drugs. Jan M. Woynarowski and Barbara A. Woynarowska
Chapter 23. Contributions of apoptosis and senescence to cytotoxicity produced by microtubule stabilizing agents. Laura E. Klein and Susan B. Horwitz
Chapter 24. Tyrosine kinase inhibitors. Michael Deininger
Chapter 25. Humanized antibodies. Morton Coleman and Richard Furman
Chapter 27. Photodynamic therapy-induced apoptosis. Nancy L. Oleinick, Rachel L. Morris and Anna Lisa Nieminen
Chapter 28. Modulation of TRAIL signaling for cancer therapy. Simone Fulda and Klaus-Michael Debatin