



Encyclopedia of Cancer

VOLUME III

L - Q

Editor-in-Chief

Joseph R. Bertino

*The Cancer Institute of New Jersey
Robert Wood Johnson Medical School
New Brunswick, New Jersey*



ACADEMIC PRESS

An imprint of Elsevier Science

Amsterdam Boston London New York Oxford Paris San Diego San Francisco Singapore Sydney Tokyo

Contents

VOLUME III

<i>Contents by Subject Area</i>	<i>xv</i>
<i>Contributors</i>	<i>xxi</i>
<i>Foreword</i>	<i>xxxvii</i>
<i>Preface</i>	<i>xxxix</i>
<i>Guide to the Use of the Encyclopedia</i>	<i>xli</i>

L

L-Asparaginase	1
Dah H. Ho and Ti Li Loo	
Late Effects of Radiation Therapy	7
Ajay Sandhu, Jacqueline Williams, and Louis Constine	
Li-Fraumeni Syndrome	21
David Malkin	
Liposome-Mediated Gene Therapy	31
John P. Dileo and Leaf Huang	

Liver Cancer: Etiology and Prevention	39
W. Thomas London	
Lung Cancer: Molecular and Cellular Abnormalities	45
Frederic J. Kaye	
Lung, Larynx, Oral Cavity, and Pharynx	51
Loïc Le Marchand and Paolo Boffetta	
Lymphoma, Hodgkin's Disease	59
Andrea K. Ng and Peter M. Mauch	
Lymphoma, Non-Hodgkin's	67
Dan L. Longo	

M

Macrophages	77
Zhongyun Dong and Isaiah J. Fidler	
Magnetic Resonance Spectroscopy and Magnetic Resonance Imaging, Introduction	89
Yael Mardor and Jack S. Cohen	

Magnetic Resonance Spectroscopy of Cancer: Clinical Overview	105	Multistage Carcinogenesis	275
Paul M. J. McSheehy, Franklyn A. Howe, and John R. Griffiths		Anthony P. Albino and Ellen D. Jorgensen	
Malignant Mesothelioma	115	myb	287
Conrad B. Falkson and Geoffrey Falkson		R. V. Tantravahi and E. Premkumar Reddy	
MAP Kinase Modules in Signaling	119		
Elaine A. Elion			
Melanoma: Biology	131	N	
Kapaettu Satyamoorthy and Meenhard Herlyn		Neoplasms in Acquired Immunodeficiency Syndrome	297
Melanoma: Cellular and Molecular Abnormalities	141	Alexandra M. Levine	
Pamela M. Pollock		Neoplasms of Unknown Primary Site	303
Melanoma: Epidemiology	153	F. Anthony Greco and John D. Hainsworth	
Sanjiv S. Agarwala and John M. Kirkwood		Neuroblastoma	315
Metabolic Diagnosis of Prostate Cancer by Magnetic Resonance Spectroscopy	167	Emmanuel Katsanis and Luke Whitesell	
Leslie C. Costello, R. B. Franklin, and J. Kurhanewicz		nm23 Metastasis Suppressor Gene	323
Mismatch Repair: Biochemistry and Genetics	179	Patricia S. Steeg	
Richard D. Kolodner and Hernan Flores-Rozas		Non-Hodgkin's Lymphoma and Multiple Myeloma: Incidence and Risk Factors	329
Molecular Aspects of Radiation Biology	187	Leslie Bernstein and Wendy Cozen	
Gary D. Kao, Anjali Gupta, and W. Gillies McKenna		Nutritional Supplements and Diet as Chemoprevention Agents	337
Molecular Basis for Tumor Immunity	197	Anna Giuliano, Susan Gapstur, Ellen Graver, and Harinder Garewal	
Bijay Mukherji			
Molecular Epidemiology and Cancer Risk	213	O	
Frederica P. Perera		Ovarian Cancer: Epidemiology	353
Molecular Mechanisms of Cancer Invasion	221	Robert F. Ozols	
Marc M. Mareel and Marc E. Bracke		Ovarian Cancer: Molecular and Cellular Abnormalities	361
Monoclonal Antibodies: Leukemia and Lymphoma	235	Rajas Chodankar and Louis Dubeau	
Joseph G. Jurcic and David A. Scheinberg			
Multidrug Resistance I: P-Glycoprotein	247		
Michael M. Gottesman		P	
Multidrug Resistance II: MRP and Related Proteins	255	Pancreas and Periampullary Tumors	369
Susan P. C. Cole and Roger G. Deeley		Harold O. Douglass, Jr., Judy L. Smith, Hector R. Nava, and John F. Gibbs	
Multiple Myeloma	269		
P. Leif Bergsagel and Hubert Szelényi			

Pancreatic Cancer: Cellular and Molecular Mechanisms	383
Raul Urrutia, Abigail A. Conley, Volker Ellenreider, Joanna Kaczynski, and Eugene P. DiMugno	
Papillomaviruses	393
Karl Münger	
PAX3-FKHR and PAX7-FKHR Gene Fusions in Alveolar Rhabdomyosarcoma	403
Frederic G. Barr	
Pediatric Cancers, Molecular Features	409
Gian Paolo Tonini	
PET Imaging and Cancer	419
Jerry M. Collins	
p53 Gene Therapy	425
N. Saadatmandi, D. R. Wilson, and R. A. Gjerset	
P-Glycoprotein as a General Antiapoptotic Protein	433
Astrid A. Ruefli, Mark J. Smyth, and Ricky W. Johnstone	
Photodynamic Therapy: Basic Principles and Applications to Skin Cancer	443
Sol Kimel, Genady Kostenich, and Arie Orenstein	
Photodynamic Therapy: Clinical Applications	453
Brian C. Wilson	
Prostate Cancer	463
Donald L. Trump	
Protein Kinase Inhibitors	475
Alexander Levitzki	
Proton Beam Radiation Therapy	481
Jay S. Loeffler and Alfred R. Smith	
p16 and ARF: Crossroads of Tumorigenesis	491
Wendell G. Yarbrough and Yue Xiong	
PTEN	507
Frank B. Furnari, H.-J. Su Huang, and Webster K. Cavenee	
Purine Antimetabolites	515
Kenneth R. Hande	

Pyrimidine Antimetabolites	527
Amanda Psyrrri and Giuseppe Pizzorno	
Pyruvate Kinases	535
Pascal A. Oude Weernink, Gerard E. J. Staal, and Gert Rijksen	

V O L U M E I

A

Acute Lymphoblastic Leukemia in Adults	1
Charles A. Schiffer	
Acute Lymphoblastic Leukemia in Children	11
Peter G. Steinherz	
Acute Myelocytic Leukemia	19
Peter H. Wiernik	
Adeno-Associated Virus: A Vector for High-Efficiency Gene Transduction	25
Kevin W. Page and Jane S. Lebkowski	
Akylating Agents	35
O. Michael Colvin	
ALL-1	43
Tatsuya Nakamura, Eli Canaani, and Carlo M. Croce	
Animal Models for Colon Cancer Chemoprevention	49
Bandaru S. Reddy	
Anthracyclines	57
Nicholas R. Bachur	
Antibodies in the Gene Therapy of Cancer	63
Zelig Eshhar and Shelley Schwarzbaum	
Antibody-Toxin and Growth Factor-Toxin Fusion Proteins	71
David FitzGerald, Robert J. Kreitman, and Ira Pastan	
Anti-idiotypic Antibody Vaccines	79
Paul B. Chapman	
Antioxidants: Carcinogenic and Chemopreventive Properties	89
Nobuyuki Ito, Masao Hirose, and Katsumi Imaida	