

Contents

Preface	<i>IX</i>
Volume 1	
Part I Cancer Biology	<i>1</i>
1 Cancer Etiology <i>Graham A. Colditz and Chetan Vakkalagadda</i>	<i>3</i>
2 Cancer Metastasis Redux <i>Gary A. Clawson</i>	<i>29</i>
3 Cancer of the Prostate Gland: Molecular Genetics <i>Sharanjot Saini and Rajvir Dahiya</i>	<i>45</i>
4 Cancer Stem Cells <i>Mei Zhang and Jeffrey M. Rosen</i>	<i>73</i>
5 Chromatin Remodeling in Carcinoma Cells <i>Therese M. Becker</i>	<i>97</i>
6 Intracellular Signaling in Cancer <i>David M. Terrian, Brian D. Lehmann, and James A. McCubrey</i>	<i>133</i>
7 Molecular Biology of Liver Cancer <i>Tulin Ersahin, Mehmet Ozturk, and Rengul Cetin-Atalay</i>	<i>177</i>
8 Prostate Tissue Stem Cells and Prostate Cancer Progression <i>Collene R. Jeter and Dean G. Tang</i>	<i>215</i>
9 The Stem Cell Niche and Its Role in Self-Renewal, Aging, and Malignancy <i>Peter Breslin S.J., Andrew Volk, and Jiwang Zhang</i>	<i>235</i>

10	Tumor Immunology	283
	<i>Sukhmani K. Padda, Rupa Narayan, Bryan M. Burt, and Edgar G. Engleman</i>	
Part II	Molecular Diagnostics and Imaging	339
11	DNA in Neoplastic Disease Diagnosis	341
	<i>Eric Q. Konnick, Cecilia C.S. Yeung, and David Wu</i>	
12	Metabolomic Imaging for Cancer Detection	379
	<i>Emily A. Decelle and Leo L. Cheng</i>	
13	Microfluidics in Nanomedicine	409
	<i>Yong Tae Kim and Robert Langer</i>	
Volume 2		
Part III	Cancer Therapies	435
14	Theoretical Foundations of Cancer Chemotherapy	437
	<i>Fatemeh Ghari and Nicholas B. La Thangue</i>	
15	Cancer Pharmacogenomics	469
	<i>Daniel L. Hertz and Howard L. McLeod</i>	
16	Carbon Nanotubes for Enhanced Biopharmaceutical Delivery	497
	<i>Harikrishna Rallapalli and Bryan Ronain Smith</i>	
17	Role of the Microbiota in Cancer Therapy	523
	<i>Phillip J. Daschner</i>	
18	Gold and Iron Oxide Nanoparticles with Antibody Guides to Find and Destroy Cancer Cells	559
	<i>Stephanie A. Parker, Isabel A. Soto, Dickson K. Kirui, Cameron L. Bardliving, and Carl A. Batt</i>	
19	Immune Checkpoint Inhibitors	585
	<i>Laura Mansi, Franck Pagès, and Olivier Adotévi</i>	
20	Immunotherapy with Autologous Cells	615
	<i>Andrew D. Fesnak and Bruce L. Levine</i>	
21	Pharmaco-Epigenomics to Improve Cancer Therapies	643
	<i>Bart Claes, Bernard Siebens, and Diether Lambrechts</i>	
22	Radioactive Microbes: Cancer Therapy Approaches	671
	<i>Ekaterina Dadachova</i>	

23	The Molecular Genetics of Retinoblastoma <i>Timothy W. Corson and Helen Dimaras</i>	683
24	RNA Interference in Cancer Therapy <i>Barbara Pasculli and George A. Calin</i>	721
25	Stem Cells and Colon Cancer <i>Simone Di Franco, Antonina Benfante, Flora Iovino, Sebastiano Bonventre, Francesco Dieli, Giorgio Stassi, and Matilde Todaro</i>	775
26	Strategies for Targeting Cancer Stem Cells <i>R. Allan Mufson</i>	799
27	Targeted Therapy: Genomic Approaches <i>Tim N. Beck, Linara Gabitova, and Ilya G. Serebriiskii</i>	823
28	Therapeutics against Cancer Stem Cells: Targeting the Root of Cancer <i>Kristen M. Smith and Catriona H.M. Jamieson</i>	877
	Index	929