# Contents

## Part I  Regulation of PKC Isozyme Function: From Genes to Biochemistry

1  **Protein Kinase C in Cancer Signaling and Therapy:**  
Introduction and Historical Perspective ................................................. 3  
Alex Toker

2  **Regulation of Conventional and Novel Protein Kinase C Isozymes by Phosphorylation and Lipids** ............................... 9  
Alexandra C. Newton

3  **Phorbol Esters and Diacylglycerol: The PKC Activators** ..................... 25  
Peter M. Blumberg, Noemi Kedei, Nancy E. Lewin,  
Dazhi Yang, Juan Tao, Andrea Telek, and Tamas Geczy

4  **Diacylglycerol Signaling: The C1 Domain, Generation of DAG, and Termination of Signals** .............................. 55  
Isabel Mérida, Silvia Carrasco, and Antonia Avila-Flores

5  **Regulation of PKC by Protein–Protein Interactions in Cancer** .......... 79  
Jeewon Kim and Daria Mochly-Rosen

## Part II  PKC Isozymes in the Control of Cell Function

6  **Introduction: PKC Isozymes in the Control of Cell Function** .......... 107  
Gry Kalstad Lønne and Christer Larsson

7  **Regulation and Function of Protein Kinase D Signaling** ................... 117  
Enrique Rozengurt

8  **PKC and Control of the Cell Cycle** .................................................. 155  
Jennifer D. Black
9 PKC and the Control of Apoptosis ................................................................. 189
Mary E. Reyland and Andrew P. Bradford

10 Atypical PKCs, NF-κB, and Inflammation .............................................. 223
Maria T. Diaz-Meco and Jorge Moscat

Part III PKC Isozymes in Cancer

11 Introduction: PKC and Cancer ................................................................. 247
Marcelo G. Kazanietz

12 Protein Kinase C, p53, and DNA Damage .............................................. 253
Kiyotsugu Yoshida

13 PKCs as Mediators of the Hedgehog and Wnt Signaling Pathways ............. 267
Natalia A. Riobo

14 PKC–PKD Interplay in Cancer ................................................................. 287
Q. Jane Wang

15 Transgenic Mouse Models to Investigate Functional Specificity of Protein Kinase C Isoforms in the Development of Squamous Cell Carcinoma, a Nonmelanoma Human Skin Cancer ......................................................... 305
Ajit K. Verma

16 PKC Isozymes and Skin Cancer ................................................................. 323
Mitchell F. Denning

17 PKC and Breast Cancer ................................................................. 347
Sofia D. Merajver, Devin T. Rosenthal, and Lauren Van Wassenhove

18 PKC and Prostate Cancer ................................................................. 361
Jeewon Kim and Marcelo G. Kazanietz

19 Protein Kinase C and Lung Cancer .................................................... 379
Lei Xiao

Part IV PKC Isozymes as Targets for Cancer Therapy

20 Introduction ......................................................................................... 403
Patricia S. Lorenzo
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>PKC and Resistance to Chemotherapeutic Agents</td>
<td>409</td>
</tr>
<tr>
<td></td>
<td>Alakananda Basu</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>PKCδ as a Target for Chemotherapeutic Drugs</td>
<td>431</td>
</tr>
<tr>
<td></td>
<td>Chaya Brodie and Stephanie L. Lomonaco</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Atypical PKCs as Targets for Cancer Therapy</td>
<td>455</td>
</tr>
<tr>
<td></td>
<td>Verline Justilien and Alan P. Fields</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td>485</td>
</tr>
</tbody>
</table>
Protein Kinase C in Cancer Signaling and Therapy
Kazanietz, M.G. (Ed.)
2010, XIV, 494 p. 37 illus., 11 illus. in color., Hardcover
A product of Humana Press