## Contents

### Part I Sphingolipids in Cancer

**Sphingosine Kinase/Sphingosine 1-Phosphate Signaling in Cancer Therapeutics and Drug Resistance**
Shanmugam Panneer Selvam and Besim Ogretmen

**Using ASMase Knockout Mice to Model Human Diseases**
Guoqiang Hua and Richard Kolesnick

**New Perspectives on the Role of Sphingosine 1-Phosphate in Cancer**
Susan Pyne and Nigel J. Pyne

**Sphingolipids and Response to Chemotherapy**
Marie-Thérèse Dimanche-Boitrel and Amélie Rebillard

**Lung Cancer and Lung Injury: The Dual Role of Ceramide**
Tzipora Goldkorn, Samuel Chung, and Simone Filosto

**Sphingolipids’ Role in Radiotherapy for Prostate Cancer**
Carla Hajj and Adriana Haimovitz-Friedman

### Part II Sphingolipids in Cardio-Reno-vascular Diseases

**Sphingolipid Metabolism and Atherosclerosis**
Xian-Cheng Jiang and Jing Liu

**Cardiovascular Effects of Sphingosine-1-Phosphate (S1P)**
Bodo Levkau

**Cross Talk Between Ceramide and Redox Signaling: Implications for Endothelial Dysfunction and Renal Disease**
Pin-Lan Li and Yang Zhang
Part III  Sphingolipids in Inflammation, Infection and Lung Diseases

Sphingolipids in Lung Endothelial Biology and Regulation of Vascular Integrity ......................................................... 201
Taimur Abbasi and Joe G.N. Garcia

Sphingolipids in Acute Lung Injury ........................................ 227
Stefan Uhlig and Yang Yang

The Involvement of Sphingolipids in Chronic Obstructive Pulmonary Diseases ....................................................... 247
Irina Petrache and Daniela N. Petrusca

Ceramide in Cystic Fibrosis .................................................. 265
Heike Grassmé, Joachim Riethmüller, and Erich Gulbins

Regulation of the Sphingosine Kinase/Sphingosine 1-Phosphate Pathway ................................................................. 275
K. Alexa Orr Gandy and Lina M. Obeid

Bacterial Infections and Ceramide ........................................ 305
Heike Grassmé and Katrin Anne Becker

Viral Infections and Sphingolipids ........................................ 321
Jürgen Schneider-Schaulies and Sibylle Schneider-Schaulies

Ceramide in Plasma Membrane Repair .................................. 341
Annette Draeger and Eduard B. Babiychuk

Sphingolipids and Inflammatory Diseases of the Skin ............... 355
Burkhard Kleuser and Lukasz Japtok

Sphingolipids in Obesity, Type 2 Diabetes, and Metabolic Disease ... 373
S.B. Russo, J.S. Ross, and L.A. Cowart

Part IV  Sphingolipids in Neuro-psychiatry and Muscle Diseases

Neuronal Forms of Gaucher Disease ...................................... 405
Einat B. Vitner and Anthony H. Futerman

Sphingolipids in Neuroinflammation ..................................... 421
Laura Davies, Klaus Fassbender, and Silke Walter

Sphingolipids in Psychiatric Disorders and Pain Syndromes ....... 431
C. Mühle, M. Reichel, E. Gulbins, and J. Kornhuber

Role of Sphingosine 1-Phosphate in Skeletal Muscle Cell Biology .... 457
Paola Bruni and Chiara Donati

Index .................................................................................. 469
Sphingolipids in Disease
Gulbins, E.; Petrache, I. (Eds.)
2013, VIII, 478 p., Hardcover
ISBN: 978-3-7091-1510-7