

## Book Reviews

*Editorial Policy.* Recently published books and journals (one copy) are invited by the Editorial Office for announcement and review in ANTICANCER RESEARCH (no fee). Each announcement should include the full title of the publication, authors or editors, the number of pages, price, year of publication, ISBN and publisher. Publishers will be notified upon receipt of books and tear sheets of reviews will be sent after publication. Books will be returned to the sender only if the announcement is rejected. Reviews will be objective and clear regarding the content, quality and usefulness of the publication.

### Cell Viability Assays. Methods and Protocols.

*Edited by D.F. Gilbert, O. Friedrich.*

2017, pp 299, Eur 117.69, ISBN: 978-1-4939-6959-3.

Springer Science+Business Media LLC, New York, NY, USA.

This volume provides an overview of commonly used methods and protocols for cell fitness indicators. Chapters detail biochemical, fluorescence and luminescence-based strategies, computational, and label-free methodologies for assaying cellular viability by means of e.g. viscoelastic properties, impedance and multiphoton microscopy. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

### Lysosomes. Methods and Protocols

*Edited by K.M. Öllinger, H. Appelqvist.*

2017, pp 311, Eur 117.69, ISBN: 978-1-4939-6932-6.

Springer Science+Business Media LLC, New York, NY, USA.

This volume provides laboratory protocols essential for studies on lysosomal biology. Chapters aim to guide researchers in their exploration of lysosomes, both under normal conditions and in pathological processes. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

### Chordomas and Chondrosarcomas of the Skull Base and Spine. 2nd Edition.

*Edited by G.R. Harsh IV, F. Vaz-Guimaraes.*

2017, pp 484, USD 131.25, ISBN: 978-0-12-804257-1.

Academic Press, Elsevier, Cambridge, MA, USA.

*Chordomas and Chondrosarcomas of the Skull Base and Spine, Second Edition*, is a major reference and guide for neurosurgeons, medical oncologists, neuroscientists, orthopedic surgeons, head and neck surgeons and radiation oncologists that treat patients and research chordomas and chondrosarcomas of the axial skeleton.

This book is the unique result of the collaboration of multidisciplinary specialists from a wide variety of fields (neurological sciences, medical oncology, molecular biology, orthopedics and radiation oncology), offering the most relevant information about chordomas and chondrosarcomas of the axial skeleton from each of these fields condensed into one single volume.

#### Key Features:

- Presents an up-to-date, comprehensive resource that details chordomas and chondrosarcomas from a multidisciplinary approach;
- Edited by the leading researchers in brain and skull base tumors;
- Includes chapters written by the Chordoma Foundation and Sarcoma Foundation of America.

### Role of Nutraceuticals in Cancer Chemosensitization, Volume 2. 1st Edition.

*Edited by A.C. Bharti, B.B. Aggarwal.*

2017, pp 398, USD 131.25, ISBN: 978-0-12-812373-7.

Academic Press, Elsevier, Cambridge, MA, USA.

*Role of Nutraceuticals in Chemoresistance to Cancer, Volume Two*, focuses on nutraceuticals, the compounds derived from natural sources, which are usually multi-targeted as a means to overcome chemoresistance. This book discusses the role of several compounds related to nutraceuticals and chemoresistance, such as curcumin, resveratrol, indole 3-carbinol, tocotrienols, ursolic acid, fisetin, celastrol, gambogic, butein, catechins and silymarin. It is a valuable resource for cancer researchers, oncologists and members of several areas of the biomedical field who are interested in understanding how to use nutraceuticals as a sensitizing agent for chemotherapy.

#### Key Features:

- Brings updated information on natural compounds used as specific inhibitors of cell signaling pathways as reviewed by experts in the field;
- Presents experts analysis and summary of reported and novel findings and potential translational application in cancer patients;
- Describes molecular mechanisms with new and helpful approaches for the readers to use in their own investigations.

### An Introduction to Physical Oncology: How Mechanistic Mathematical Modeling Can Improve Cancer Therapy Outcomes.

*Edited by V. Cristini, E. Koay, Z. Wang.*

2017, pp 164, GBP 55.99, ISBN: 978-1-46-655134-3.

CRC Press, New York, NY, USA.

Physical oncology has the potential to revolutionize cancer research and treatment. The fundamental rationale behind this approach is that physical processes, such as transport

mechanisms for drug molecules within tissue and forces exchanged by cancer cells with tissue, may play an equally important role as biological processes in influencing progression and treatment outcome.

This book introduces the emerging field of physical oncology to a general audience, with a focus on recent breakthroughs that help in the design and discovery of more effective cancer treatments. It describes how novel mathematical models of physical transport processes incorporate patient tissue and imaging data routinely produced in the clinic to predict the efficacy of many cancer treatment approaches, including chemotherapy and radiation therapy. By helping to identify which therapies would be most beneficial for an individual patient, and quantifying their effects prior to actual implementation in the clinic, physical oncology allows doctors to design treatment regimens customized to each patient's clinical needs, significantly altering the current clinical approach to cancer treatment and improving the outcomes for patients.

*Key Features:*

- Presents mechanistic modeling methods that investigate a tumor as a combination of both, interplaying physical and biological problems;
- Demonstrates how mathematical modeling can be integrated with in vitro, in vivo, and patient data analysis for predicting patient-specific tumor response to treatment;
- Facilitates translation of biophysical models to clinical use by deriving imaging-based biomarkers from standard clinical diagnostic measurements;
- Provides doctors with a complementary quantitative tool to assist them in making treatment decisions.

**Mechanisms of Molecular Carcinogenesis – Volume 2.**  
**Edited by J Haybaeck.**

2017, pp 374, Eur 176.79, ISBN: 978-3-319-53660-6.  
Springer International Publishing, Cham, Switzerland.

This book provides an inclusive overview of the molecular and cellular mechanisms of carcinogenesis and offers comprehensive insights into related clinical and therapeutic aspects.

This second volume complements the first by presenting and concisely explaining the carcinogenesis of various tumor entities such as non-melanoma skin cancers, bone and soft tissue tumors, pancreatic cancers, hepatocellular cancer and neuroendocrine tumors. As in volume one, each chapter illuminates the similarities and dissimilarities of changed signaling pathways in the different organ systems and depicts potential therapeutic strategies. The focus of volume two lies on the presentation of modern molecular biological techniques for diagnosis, as well as strategies for biomarker identification and validation. Furthermore, it discusses potential therapeutic targets and individualized treatment strategies, offering a valuable resource for all basic scientists and medical researchers interested in translational cancer research.

**Molecular Basis for Mitochondrial Signaling.**

*Edited by T.K. Rostovtseva.*

2017, pp 386, Eur 155.99, ISBN 978-3-319-55537-9.  
Springer International Publishing, Cham, Switzerland.

This book covers recent advances in the study of structure, function, and regulation of metabolite, protein and ion translocating channels, and transporters in mitochondria. A wide array of cutting-edge methods are covered, ranging from electrophysiology and cell biology to bioinformatics, as well as structural, systems, and computational biology. At last, the molecular identity of two important channels in the mitochondrial inner membrane, the mitochondrial calcium uniporter and the mitochondrial permeability transition pore have been established. After years of work on the physiology and structure of VDAC channels in the mitochondrial outer membrane, there have been multiple discoveries on VDAC permeation and regulation by cytosolic proteins. Recent breakthroughs in structural studies of the mitochondrial cholesterol translocator reveal a set of novel unexpected features and provide essential clues for defining therapeutic strategies. *Molecular Basis for Mitochondrial Signaling* covers these and many more recent studies of mitochondria function, their communication with other organelles, and their critical roles in development, aging, and in a plethora of stressful or degenerative events. Authored by leading researchers in the field, this volume will be an indispensable reference resource for graduate students and academics working in related areas of biophysics and cell biology as well as for professionals within industry.

**Protein Reviews. Volume 17.**

*Edited by M.Z. Atassi.*

2017, pp 163, Eur 114.39, ISBN: 978-981-10-3709-2.  
Springer Singapore, Singapore.

The aim of the Protein Reviews is to serve as a publication vehicle for review articles that focus on crucial current vigorous aspects of protein structure, function, evolution and genetics. Volume 17 of *Protein Reviews* is the beginning of a new publication format. The volumes will appear online before they are published in a printed book. Articles will be selected according to their importance to the understanding of biological systems, their relevance to the unravelling of issues associated with health and disease or their impact on scientific or technological advances and developments.

The chapters in this volume are authored by experts in the field. They deal with aspects of structure and biological activity of selected proteins. Specific chapters deal with the aggregation of FET proteins (FUS, EWSR1, TAF15) as a pathological change in amyotrophic lateral sclerosis, structural changes fundamental to gating of the cystic fibrosis transmembrane conductance regulator anion channel pore, the dual roles for epithelial splicing regulatory proteins 1 (ESRP1) and 2 (ESRP2) in cancer progression, controlling autolysis during flagella insertion in Gram-negative bacteria, the regulation of skeletal

muscle myoblast differentiation and the proliferation by pannexins, hyaluronidase and chondroitinase, factors that control mitotic spindle elongation, how secreted phospholipase A2 type IIA (sPLA2-IIA) activates integrins in an allosteric manner, the simple and unique allosteric machinery of *Thermus caldophilus* lactate dehydrogenase, and the reduction of chemically stable multibonds: Nitrogenase-like biosynthesis of tetrapyrroles. This volume is intended for research scientists, clinicians, physicians, and graduate students in fields of biochemistry, cell biology, molecular biology microbiology, immunology and genetics.

**Cutaneous Melanoma. 1st Edition. A Pocket Guide for Diagnosis and Management.**

*Edited by G. Argenziano, A. Lallas, C. Longo, E. Moscarella, A. Kyrgidis, G. Ferrara.*  
2017, pp 252, USD 74.96, ISBN: 978-0-12-804000-3.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Cutaneous Melanoma: A Pocket Guide for Diagnosis and Management* serves as an easy-to-consult, short, and schematic reference providing guidelines for diagnosing and managing melanoma in the context of various clinical scenarios. In the daily routine of a busy clinician, there is a need for schematic reference tools that allow quick consultation for immediate decisions. Melanoma is a deadly disease that should be promptly managed following precise and evidence-based guidelines.

The guide contains many schematics and figures, vastly outnumbering the pages dedicated to text. This guide follows the sequence of a real clinical setting, going from the first screening visit to the final stages of terminal patients.

*Key Features:*

- Provides a quick-access resource for diagnosis and treatment of melanoma patients at all stages;
- Includes succinct guidelines, schematics, and figures for busy clinicians;
- Concludes with a section addressing special clinical situations, including melanoma in pregnancy, pediatric melanoma, familial melanoma and MPM, atypical Spitz tumor, occult primary melanoma, and the histopathologic gray zone.

**miRNA and Cancer, Volume 135. 1st Edition.**

*Edited by K. Tew, P. Fisher, C. Croce.*  
2017, pp 230, USD 128.25, ISBN: 978-0-12-811922-8.  
Academic Press, Elsevier, Cambridge, MA, USA.

*miRNA and Cancer, Volume 135*, the latest volume in the *Advances in Cancer Research* series, provides invaluable information on the exciting and fast-moving field of cancer research. This volume presents original reviews on research bridging oncology and gene expression, and includes specific chapters on Non-coding RNAs as Biomarkers of Cancer, The Enigma of microRNA Regulation in Cancer, Animal Models to Study microRNA functions, Non-coding RNAs and Cancer,

microRNAs in Cancer Susceptibility, ts-RNAs versus microRNAs, microRNAs and AML, and microRNAs and Epigenetics.

*Key Features:*

- Provides information on cancer research;
- Offers outstanding and original reviews on a range of cancer research topics;
- Serves as an indispensable reference for researchers and students alike.

**Progress in Molecular Biology and Translational Science. Volume 151. Approaches to Understanding Breast Cancer.**

*Edited by R. Lakshmanaswamy.*  
2017, pp 294, USD 128.25, ISBN: 978-0-12-812772-8.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Approaches to Understanding Breast Cancer, Volume 151*, the latest volume in the *Progress in Molecular Biology and Translational Science* series focuses on breast cancer, with new chapters that include information on Breast Cancer Epidemiology, Prevention, and Screening, DCIS: Current Principles of Management, Pregnancy and Hormonal Prevention of Breast Cancer, Chemokines: Key Players in Pathobiology of Breast Cancer, Microbiota and Breast Cancer, Experimental Therapeutic Use of Estrogen Receptor Beta Agonists in Prevention and Treatment of Endocrine Therapy Resistant Breast Cancers: Observations from Pre-Clinical Models, Targeting Breast Cancer Stem Cells: Key for Anti-Metastatic Therapy, and Experimental Therapy of Advanced Breast Cancer: Target NFAT1-MDM2-p53 Pathway.

*Key Features:*

- Accessible to students and researchers alike;
- Written by leading authorities in the field.

**Peptidomics of Cancer-Derived Enzyme Products, Volume 42. 1st Edition.**

*Edited by T. Hu, F. Tamanoi.*  
2017, pp 188, USD 119.25, ISBN: 978-0-12-812638-7.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Peptidomics of Cancer-Derived Enzyme Products, Volume 42*, the latest in *The Enzymes* series, is ideal for researchers in biochemistry, molecular and cell biology, pharmacology, and cancer, with this volume featuring high-caliber, thematic articles on the topic of peptidomics of cancer-derived enzyme products. Specific chapters cover Circulating peptidome and tumor-resident proteolysis, Colon tumor secretome, Chemoenzymatic method for glycomics, Human plasma peptidome for pancreatic cancer, Lipoproteomics and quantitative proteomics, Salivaomics: Protein markers/extracellular RNA/DNA in saliva, and Enzyme-responsive vectors for cancer therapy.

*Key Features:*

- Presents some of the most recent advances in the identification and function of enzymes changes in cancer;
- Features authoritative expertise from recognized contributors to the field.

**Management of Lymphomas: A Case-Based Approach.**

*Edited by J. Zain, L.W. Kwak.*

2017, pp 204, Eur 41.59, ISBN: 978-3-319-26825-5.

Springer International Publishing, Cham, Switzerland.

This book will provide an overview of how to manage patients with lymphoma in the format of a series of engaging case studies. Lymphomas are cancers that originate in the lymphatic system. There are two main types of lymphoma: Hodgkin lymphoma and

non-Hodgkin lymphoma. These lymphomas comprise various subtypes with prognosis and treatment depending on the stage and type of the cancer. Lymphoma is a major global health problem; non-Hodgkin lymphoma in particular is the tenth most common type of cancer worldwide. In response to this there have been a number of significant advances in the available treatment options for lymphoma with new breakthrough drugs being approved or registered for approval. In light of this, this case study book will be an extremely timely guide for all hematologists, oncologists, and healthcare professionals wishing to keep up-to-date with these recent developments. The format of this book is also particularly appealing as it offer readers a practical approach to the clinical management of patients with these conditions as suggested by leading physicians from the City of Hope National Medical Center in California, USA in an era of vast therapeutic development.