

## 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.

### Renal Disease in Cancer Patients.

*Edited by Kevin Finkel and Scott Howard.*

2013, pp. 312, Eur 92.95, ISBN: 978-0-12-415948-8.

Academic Press / Elsevier, San Diego, CA, USA.

*Renal Disease in Cancer Patients* is a translational reference detailing the nephrological problems that cancer patients face. This book provides a common language for nephrologists, oncologists, hematologists, and other clinicians who treat cancer patients, to discuss the development of renal diseases in the context of cancer and options for their optimum diagnosis, management, and treatment.

With the advent of better supportive care and the era of personalized medicine, patients with cancer are living longer, and oncologists and nephrologists now recognize the serious consequences of renal disease among these patients. Designed especially with this new need in mind, this volume presents the various renal diseases affecting cancer patients in a single volume. The book covers topics in radiation nephritis, obstructive nephropathy, drug nephropathy, graft-versus-host disease, and more.

### Cancer Drug Design and Discovery.

*Edited by Stephen Neidle.*

2013, pp. 640, Eur 92.95, ISBN: 9780123965219.

Academic Press / Elsevier, San Diego, CA, USA.

This book offers unique information on the discovery and design of new anticancer agents, covering recent notable successes resulting from the human genome and cancer genomics projects. These advances have provided information on targets involved in specific cancers that are leading to effective medicines for at least some of the common solid tumors. The structure of this book includes molecules from basic science through to clinical development. Appealing to a broad audience, this is an excellent reference for translational researchers interested in cancer biology and medicine as well as students in pharmacy, pharmacology, or medicinal and biological chemistry and clinicians taking oncology options.

### Gene Therapy of Cancer.

*Edited by Edmund Lattime and Stanton Gerson.*

2013, pp. 554, Eur 143, ISBN: 9780123942951.

Academic Press / Elsevier, San Diego, CA, USA.

The Third Edition of *Gene Therapy of Cancer* provides crucial updates on the basic and applied sciences of gene therapy. It offers a comprehensive assessment of the field including the areas of suicide gene therapy, oncogene and suppressor gene targeting, immunotherapy, drug resistance gene therapy, and the genetic modification of stem cells. This book explains the underlying cancer biology necessary for understanding proposed therapeutic approaches, presents in-depth description of targeting systems and treatment strategies and covers the breadth of gene therapy approaches including immunotherapeutic, drug resistance, oncolytic viruses, as well as regulatory perspectives from both the NCI and FDA. Researchers at all levels of development, from basic laboratory investigators to clinical practitioners, will find this book to be instructive.

### Experiments in the Purification and Characterization of Enzymes. A Laboratory Manual.

*By Thomas Crowley and Jack Kyte.*

2014, pp. 266, Eur 60.95, ISBN: 9780124095441.

Academic Press / Elsevier, San Diego, CA, USA.

This book provides students with a working knowledge of the fundamental and advanced techniques of experimental biochemistry. Included are instructions and experiments that involve purification and characterization of enzymes from various source materials, offering students an excellent experience in kinetics and data analysis. By focusing on the relationship between structure and function in enzymes, this volume provides a strong research foundation for students enrolled in a biochemistry lab course by outlining how to evaluate and effectively use scientific data. Instructors will find this book useful because the modular nature of the lab exercises allows them to apply the exercises to any set of proteins and incorporate the exercises into their courses as they see fit, allowing for greater flexibility in the use of the material.

### Essentials of Stem Cell Biology.

*Edited by Robert Lanza and Anthony Atala.*

2013, pp. 712, Eur 143, ISBN: 9780124095038.

Academic Press / Elsevier, San Diego, CA, USA.

*Essentials of Stem Cell Biology* serves the needs of the evolving population of scientists, researchers, practitioners, and students embracing the latest advances in stem cells. Representing the combined effort of 7 editors and more than 200 scholars and scientists whose pioneering work has defined our understanding of stem cells, this book combines the prerequisites for a general understanding of adult and embryonic stem cells with a presentation by the world's experts of the latest research information about specific organ systems. From basic biology, early development, ectoderm, mesoderm, endoderm, and methods to the application of stem cells to specific human diseases, regulation and ethics, and patient perspectives, no topic in the field of stem cells is left uncovered.

### **Benign and Pathological Chromosomal Imbalances. Microscopic and Submicroscopic Copy Number Variations (CNVs) in Genetics and Counseling.**

*By Thomas Liehr.*

2013, pp. 232, Eur 79.95, ISBN: 9780124046313.  
Academic Press / Elsevier, San Diego, CA, USA.

This volume systematically clarifies the disease implications of cytogenetically visible copy number variants (CG-CNV) using cytogenetic assessment of heterochromatic or euchromatic DNA variants. While variants of several megabasepair can be present in the human genome without clinical consequence, visually distinguishing these benign areas from disease implications does not always occur to practitioners accustomed to costly molecular profiling methods such as FISH, aCGH, and NGS.

As technology-driven approaches like FISH and aCGH have yet to achieve the promise of universal coverage or cost efficacy to sample investigated, deep chromosome analysis and molecular cytogenetics remains relevant for technology translation, study design, and therapeutic assessment. Knowledge of the rare but recurrent rearrangements unfamiliar to practitioners saves time and money for molecular cytogeneticists and genetics counselors, helping to distinguish benign from harmful CG-CNV and decide which molecular cytogenetics tools to deploy.

### **Designing Science Presentations. A Visual Guide to Figures, Papers, Slides, Posters, and More.**

*By Matt Carter.*

2013, pp. 384, Eur 35.95, ISBN: 9780123859693.  
Academic Press / Elsevier, San Diego, CA, USA.

This volume guides researchers and graduate students in the creation of compelling science communication. Most scientists never receive formal training in the creation, delivery, and evaluation of such material, yet it is essential for publishing in high-quality journals, soliciting funding, attracting lab personnel, and advancing a career.

This clear, readable volume fills that gap and provides visually intensive guidance at every step—from the construction of original figures to the presentation and delivery of those figures in papers, slideshows, posters, and websites. It provides pragmatic advice on the preparation and delivery of exceptional scientific presentations; demonstrates hundreds of visually striking presentation techniques, giving readers inspiration for creating their own; and is structured so that readers can easily find answers to particular questions.

### **Cancer Genomics. From Bench to Personalized Medicine**

*Edited by Graham Dellaire, Jason N. Berman and Robert J. Arceci.*

2014, pp. 512, Eur 81.00, ISBN: 9780123969675.  
Academic Press / Elsevier, San Diego, CA, USA.

*Cancer Genomics* addresses how recent technological advances in genomics are the way we diagnose and treat cancer. Built on the historical context of cancer genetics over the past 30 years, the

book provides a snapshot of the current issues and state-of-the-art technologies used in cancer genomics. Subsequent chapters highlight how these approaches have informed our understanding of hereditary cancer syndromes and the diagnosis, treatment and outcome in a variety of adult and pediatric solid tumors and hematologic malignancies. The dramatic increase in cancer genomics research and ever-increasing availability of genomic testing are not without significant ethical issues, which are addressed in the context of the return of research results and the legal considerations underlying the commercialization of genomic discoveries. The book concludes with "Future Directions", examining the next great challenges of cancer genomics, namely the contribution of non-coding RNAs to disease pathogenesis and the interaction of the human genome with the environment.

### **Core Concepts in Cell Biology.**

*Curated by Rebecca Alvania.*

2013, pp. 484, Eur 25.95, ISBN: 9780124201934.  
Academic Press / Elsevier, San Diego, CA, USA.

This volume collates topical review articles recently published in Cell Press journals, offering a broad overview of the recent research developments in cell biology. Written by leading cell biologists, this publication informs, inspires, and connects cell biologists at all stages in their careers with timely, comprehensive insight into the most recent exciting developments across cell biology and hot topics within core areas of the field including: Signaling mechanisms and membrane biology; Cytoskeletal self-organization and cell polarity; Organelle dynamics and biogenesis; Morphogenesis and cell motility; Chromatin and genome organization in nuclear function.

### **Handbook of Dermatologic Surgery.**

*By Elisabet Hale, Julie Karen, Perry Robins.*

2014, pp. 126, Eur 74.89, ISBN: 978-1-4614-8335-9.  
Springer Science + Business Media, New York, NY, USA.

This readily transportable book incorporates the most cutting edge technology applicable to dermatologists and dermatologic surgeons.

Designed in an easy-to-use manner for trained dermatologists/dermatologic surgeons, as well as those in training, dermatology residents and fellows, and medical students rotating through dermatology. Designed as a reference guide for dermatologic surgery and aesthetic procedures, it disseminates key scientific information in an easy-to-use pocket book.

### **Pediatric Germ Cell Tumors. Biology Treatment Survivorship.**

*Edited by A. Lindsay Frazier and James F. Amatruda.*

2014, pp. 135, Eur 106.99, ISBN 978-3-642-38970-2.

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

Germ cell tumors are relatively rare, and compilations of knowledge that encompass the entire spectrum of the disease are

lacking. This publication covers a broad range of topics, including biology, epidemiology, pathology, treatment, and late effects, and spans the entire life course. Bearing in mind that germ cell tumors are most prevalent in the adolescent and young adult age group, causes of disease and treatment approaches in pediatric and adult patients are compared and contrasted. Written by international experts in the field, this book will be of interest to both pediatric and adult oncologists.

### **Gene Function Analysis. Second Edition.**

*Edited by Michael F. Ochs.*

2014, pp. 416, Eur 117,69, ISBN: 978-1-62703-720-4.

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

The determination of protein function has been a major goal of molecular biology since the founding of the discipline. However, we now know that it is critical to establish the background in which gene function is determined and to perform experiments in multiple applicable backgrounds. This volume presents various computational and experimental techniques for identifying not only the function of an individual gene, but also the partners that work with that gene. The theme of data integration runs strongly through the computational techniques, with many focusing on gathering data from different sources and different biomolecular types. Experimental techniques have evolved to determine function in specific tissues and at specific times during development. Written in the 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 protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, this book seeks to serve both professionals and novices with a growing understanding of the complexity of gene function.

### **Lip Cancer.**

*Edited by A. Kolokythas*

2014, pp. 163, Eur 149.79, ISBN: 978-3-642-38179-9.

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

The lip is the most common site of malignancy in the head and neck region. Although high cure rates can be achieved by early treatment, a significant percentage of lip cancers demonstrate aggressive behavior, posing management difficulties. Given the aesthetic and functional significance of the lip, reconstruction post surgery is also extremely important, yet this, too, can be challenging. This textbook is intended as a comprehensive reference that will provide easy-to-follow and well-organized guidance on the management of lip cancer, from diagnosis to treatment and reconstruction. After discussion of anatomy and premalignant conditions, detailed attention is paid to squamous cell carcinoma of the lip. Surgical management is explained, and the roles of radiation therapy and chemotherapy, discussed. Reconstruction techniques following ablative surgery are then described in depth, with reference to defect size and complexity. In addition, the potential complications of treatment and reconstruction are presented, with advice on their management.

### **Clinical Ophthalmic Oncology. Retinal Tumors.**

*Edited by A.D. Singh, B.E Damato.*

2014, pp. 152, Eur 149.79, ISBN: 978-3-642-39488-1.

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

*Clinical Ophthalmic Oncology* provides practical guidance and advice on the diagnosis and management of the complete range of ocular cancers. The book offers up-to-date knowledge required for early detection and treatment. The information provided assists with efficient patient care and verification of diagnostic conclusions. The book format is user-friendly. Diagnosis and therapy for retinal tumors including vitreoretinal lymphoma and paraneoplastic disorders is discussed.

### **Hypoxia and Cancer. Biological Implications and Therapeutic Opportunities.**

*Edited by G. Melillo.*

2014, pp. 363, Eur 160.49, ISBN: 978-1-4614-9166-8.

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

The study of molecular mechanisms underlying tumor hypoxias allows for better understanding of the tumor microenvironment. This book examines how changes in oxygen levels in the tumor microenvironment impact cancer cell biology and provide new opportunities for cancer therapy. This book is a reference tool for students, scientists and clinicians who are interested in the role of hypoxia in cancer biology and therapy.

### **Prevention of Nausea and Vomiting in Cancer Patients.**

*By M. Aapro, K. Jordan, P. Feyer.*

2013, pp. 59, Eur 42.79, ISBN: 978-1-908517-87-6.

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

Prevention of Nausea and Vomiting in Cancer Patients provides information on managing nausea and vomiting, which are common and often severe adverse events experienced by patients receiving chemotherapy and radiotherapy. The book refers to the latest American Society of Clinical Oncology (ASCO), European Society of Medical Oncology (ESMO), and Multinational Association for Supportive Care in Cancer (MASCC) guidelines.

### **Obesity and Breast Cancer. The Role of Dysregulated Estrogen Metabolism.**

*By Kristy A. Brown, Evan R. Simpson.*

2014, pp. 56, Eur. 53.49, ISBN: 978-1-4899-8001-4.

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

Obesity is a risk factor for breast cancer in older women. A number of adipose-derived and obesity-related factors have been shown to affect tumour cell growth. These include adipokines, insulin, IGF-1 and oestrogens. The majority of obesity-related postmenopausal breast cancers are oestrogen-dependent. Since the ovaries no longer produce oestrogens after menopause, and that circulating levels are negligible, it is evident that it is the oestrogens produced locally

within the breast adipose that are responsible for the increased growth of breast cancer cells. Aromatase is the enzyme that converts androgens into oestrogens and its regulation is dependent on the activity of a number of tissue-specific promoters. Targeting oestrogen biosynthesis in obesity may be useful for the prevention of breast cancer. Aromatase inhibitors are efficacious at treating postmenopausal breast cancer and recent studies suggest that they may also be useful in the prevention setting. However, these compounds inhibit the catalytic activity of aromatase and as a consequence lead to a number of undesirable side-effects, including arthralgia and possible cognitive defects due to inhibition of aromatase in the bone and brain, respectively. Novel therapies, such as those employed to treat obesity-associated disease, including anti-diabetics, may prove successful at inhibiting aromatase specifically within the breast. This SpringerBrief explores all of these issues in depth.

### **Cancer Prevention. Dietary Factors and Pharmacology.**

*Edited by A.M. Bode, Z. Dong.*

2014, pp. 288, Eur 101.64, ISBN: 978-1-4614-9226-9.  
Springer Science + Business Media, New York, NY, USA.

Focused on the discovery of precise molecular targets for the development of the cancer preventive agents, this volume provides researchers and non-researchers with practical methodologies for developing and validating small molecule and phytochemical-derived drug discovery and mechanisms by which these compounds can modulate distinct target proteins involved in oncogenic signaling. This volume focuses on cancer prevention research yet also provides an introduction of cancer prevention research methods to researchers outside the field. Chapters deal with a critical discussion of both laboratory and clinical topics, with each chapter containing both a discursive section along with a detailed methods section.

### **Exocytosis Methods.**

*Edited by P. Thorn.*

2014, pp. 248, Eur 101.64, ISBN: 978-1-62703-675-7.  
Springer Science + Business Media, New York, NY, USA.

*Exocytosis Methods* examines functions ranging from protein secretion to hormone release and neurotransmission. The book begins with a section covering a range of techniques being applied to the study of single-vesicle fusion events, which are key in order to gain insight into the final steps of vesicle fusion. The volume continues with several model systems that are being employed to unravel the complexities of exocytosis. *Exocytosis Methods* was written for the *Neuromethods* series and promotes new methods in microscopy and the development of new preparations.

### **Atlas of Fine Needle Aspiration Cytology.**

*Edited by H.A. Domanski.*

2014, pp. 572, Eur 181.89, ISBN: 978-1-4471-2445-0.  
Springer Science + Business Media, New York, NY, USA.

This book covers the diagnostic areas where FNAC is used today. This includes palpable lesions and lesions sampled using various radiological methods, and correlations with ancillary examinations detailed on an entity-by-entity basis. Diagnostic methods that optimize health care are included. The interaction of the cytologist or cytopathologist with other specialists (radiologists, oncologists and surgeons) involved in the diagnosis and treatment of patients with suspicious mass lesions is emphasized.

### **Color Atlas of Thyroid Surgery. Open, Endoscopic and Robotic Procedures.**

*By Yeo-Kyu Youn, Kyu Eun Lee, June Young Choi.*

2014, pp. 150, Eur 106.99, ISBN: 978-3-642-37262-9.  
Springer Science + Business Media, New York, NY, USA.

This color atlas is a guide for open, endoscopic, and robotic thyroidectomy techniques. It included step-by-step descriptions on surgical anatomy, preoperative set-up, draping, instrumentation, as well as complications and their treatment. The description of endoscopic thyroidectomy techniques focuses on the bilateral axillo-breast approach (BABA), while in the case of robotic thyroidectomy both BABA and the bilateral axillo-postauricular approach are described. In each case, the evidence supporting the technique is carefully examined. In the closing chapter, the role of new energy sources in thyroid surgery is discussed. 200 full-color illustrations clarifying surgical anatomy, instrumentation, and procedures are included and surgical video clips are also available to readers via a website.

### **Liver Immunology, Principles and Practice. Second Edition.**

*Edited by M.E. Gershwin, J.M. Vierling, M.P. Manns.*

2014, pp. 480, Eur 149.79, ISBN: 978-3-319-02095-2.  
Springer Science + Business Media, New York, NY, USA.

*Liver Immunology: Principles and Practice, Second Edition* focused on the epidemiology and mortality of liver disease worldwide. Further topics covered include basic immunology, application of liver immunology for diagnosis, and immune-mediated liver disease, as well as those associated with the biliary tree. A chapter is devoted to non-hepatic manifestations of immune mediated liver disease and how these diseases affect the patient overall. In addition, chapters discuss various discrete immunologically-mediated infectious liver disorders including those related to bacteria, parasites, and all of the classic viruses. Chapters on the traditional autoimmune liver diseases -- primary biliary cirrhosis, autoimmune hepatitis, primary sclerosing cholangitis as well as overlap syndrome, on alcoholic liver disease, non-alcoholic fatty liver disease, and drug-induced liver disease -- are also incorporated.

### **Non-coding RNAs and Cancer.**

*Edited by Muller Fabbri.*

2014, pp. 284, Eur. 149.79, ISBN: 978-1-4614-8443-1.  
Springer Science + Business Media, New York, NY, USA.

This book functions as a guide for non-coding RNAs and cancer, spanning from its role as cancer biomarkers, to providing the most useful bioinformatic tools, to presenting some of the most relevant discoveries, which indicates how these fascinating molecules act as fine orchestrators of cancer biology. Recently identified gene regulatory mechanisms involving non-coding RNAs and iogenesis, physiology and de-regulation of non-coding RNAs in cancer as well as widely used bioinformatic approaches to the study of miRNAs are examined.

### **A Practical Guide to Human Cancer Genetics**

*By S.V. Hodgson, W.D. Foulkes, C. Eng, E.R. Maher.*

2014, pp. 420, Eur 149.79, ISBN: 978-1-4471-2374-3.

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

This volume is an up-to-date guide to the diagnosis, clinical features and management of inherited disorders conferring cancer susceptibility. It covers risk analysis and genetic counseling for individuals with a family history of cancer, and includes a discussion of predictive testing and the organization of the cancer genetics service. There is also information about the genes causing Mendelian cancer predisposing conditions and their mechanisms of action.

### **Tumor Microenvironment and Cellular Stress. Signaling, Metabolism, Imaging, and Therapeutic Targets.**

*Edited by C. Koumenis, E. Hammond, A. Giaccia.*

2014, pp. 290, Eur 149.79, ISBN: 978-1-4614-5914-9.

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

The collection of chapters in this proceeding volume reflects the latest research presented at the Aegean meeting on Tumor Microenvironment and Cellular Stress held in Crete in Fall of 2012. The book focuses on tumor microenvironment effects on tumor metabolism, cell stemness, cell viability, genomic instability and more. Additional topics include identifying common pathways that are potential candidates for therapeutic intervention, which will stimulate collaboration between groups that are more focused on elucidation of biochemical aspects of stress biology and groups that study the patho-physiological aspects of stress pathways or engaged in drug discovery.

### **Targeted Cancer Treatment in Silico. Small Molecule Inhibitors and Oncolytic Viruses.**

*By NL. Komarova, D. Wodarz.*

2014, pp. 227, Eur 53.49, ISBN: 978-1-4614-8300-7.

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

This book outlines how mathematical and computational approaches can be used to advance our understanding of cancer therapies and to improve treatment design and outcome. Each treatment technique, including surgery, chemo- and radiotherapy,

antiangiogenic drugs, and most recently, small molecule inhibitors and oncolytic viruses, tends to have a certain effectiveness in a specific class of patients, but it is often unclear what exactly causes it to succeed or fail.

This volume comprises of two parts, corresponding to two types of targeted cancer treatment: small molecule inhibitors and oncolytic viruses. In each part, the authors provide a brief overview of the treatment's biological basis and present the mathematical methods most suitable for modeling it. Additionally, they discuss how these methods can be applied to answer relevant questions about treatment mechanisms and propose modifications to treatment approaches that may potentially increase success rates.

The book is intended for both the applied mathematics and experimental oncology communities, as mathematical models are becoming an increasingly important supplement to laboratory biology in the fight against cancer.

### **Imaging in Clinical Oncology.**

*Edited by A. Gouliamos, J. Andreou, P. Kosmidis.*

2014, pp. 609, Eur 181.89, ISBN: 978-88-470-5384-7.

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

Currently available imaging modalities of relevance in clinical oncology are covered, and the presentation of a broad spectrum of oncologic diseases (of most organ systems) on these modalities is discussed and illustrated. The role of multiparametric and multimodality imaging approaches providing both morphologic and functional information is considered in detail, and careful attention is paid to the latest developments in higher field (3T) MR imaging and advanced MR techniques such as diffusion-weighted imaging, diffusion tensor imaging, perfusion-weighted imaging and spectroscopy. The major challenge of incorporating progress in quantitative imaging technology into radiotherapy treatment planning, guidance, and monitoring is addressed.

### **Structural Genomics. General Applications.**

*By Yu Wai Chen.*

2014, pp. 358, Eur 117.69, ISBN: 978-1-62703-690-0.

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

This book describes the benefits of Structural Genomics to the wider structural research community. *Structural Genomics: General Applications* helps the researcher understand macromolecular machineries and complexes. Divided into three convenient sections, topics include the cloning and production of proteins for structural studies, experimental methods, and computational methods and data analysis. Written in the 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 protocols, and notes on troubleshooting and avoiding known pitfalls. This book aims primarily to channel spin-off technologies to the average structural biologist in a small or medium-sized laboratory.

**Optimization in Drug Discovery.***Edited by G.W. Caldwell, Z. Yan.*2014, pp. 597, Eur 133.74, ISBN: 978-1-62703-741-9.  
Springer Science + Business Media, New York, NY, USA.

This revised second edition of *Optimization in Drug Discovery: In Vitro Methods* presents a wide spectrum of in vitro assays including formulation, plasma binding, absorption and permeability, cytochrome P450 (CYP) and UDP-glucuronosyltransferases (UGT) metabolism, CYP inhibition and induction, drug transporters, drug-drug interactions via assessment of reactive metabolites, genotoxicity, and chemical and photo-mutagenicity assays. Written for the Methods in Pharmacology and Toxicology series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and tips on troubleshooting and avoiding known pitfalls. Authors have developed and utilized these in vitro assays to achieve “drug-like” characteristics in addition to efficacy properties and good safety profiles of drug candidates. This book aims to guide researchers down the difficult path to successful drug discovery and development.

**Interaction of Immune and Cancer Cells.***Edited by M. Klink*2014, pp. 263, Eur 160.49, ISBN: 978-3-7091-1299-1.  
Springer Science + Business Media, New York, NY, USA.

The tumor environment is a dynamic network that includes cancer cells, immune cells, fibroblasts, endothelial cells, extracellular matrix, cytokines and receptors. The aim of this book is to summarize the role of these components, especially immune cells, in tumor suppression and/or progression and describe in detail why tumor cells can survive and spread in spite of the antitumor response of immune cells. Since immunotherapy is an attractive approach to cancer therapy, this book also provides information on the two main strategies: monoclonal antibodies and adaptive T cell immunotherapy, focusing on recent human clinical trials. This volume is a great resource for scientists and medical doctors working and/or lecturing in the field of cancer research and immunology.

**Primer to The Immune Response. 2nd Edition.***By Tak Mak, Mary Saunders, Bradley Jett.*2014, pp. 702, Eur 71.95, ISBN: 9780123852458.  
Academic Cell, AP Cell/Elsevier.

This volume is a great resource for college and university students in life sciences, medicine and other health professions who need a concise but comprehensive introduction to immunology. The authors bring clarity and readability to their audience, offering a complete survey of the most fundamental concepts in basic and clinical immunology. The content of this new edition has been updated to include current information on all aspects of basic and clinical immunology. Drawn figures are now in full color, complemented by full color plates throughout the book. The text is further enhanced by the inclusion of numerous tables, special topic boxes and brief notes that provide interesting insights. At the end of each chapter, a self-

test quiz allows students to monitor their mastery of major concepts, while a set of conceptual questions prompts them to extrapolate further and extend their critical thinking. Moreover, as part of the Academic Cell line, this textbook contains research passages that shine a spotlight on current experimental work reported in Cell Press articles. Undergraduate medical students and graduate students taking Immunology courses will find this book of particular interest.

**Image Guided Prostate Cancer Treatments.***Edited by R.L. Bard, J.J. Fütterer, D. Sperling.*2014, pp. 268, Eur 139.09, ISBN: 978-3-642-40428-3.  
Springer Science + Business Media, New York, NY, USA.

*Image-Guided Prostate Cancer Treatments* is a comprehensive reference and practical guide on the technology and application of ultrasound and MRI in the male pelvis, with special attention to the prostate. The book is organized into three main sections, the first of which is devoted to general aspects of imaging and image-guided treatments. The second section provides a systematic overview of the application of ultrasound and MRI to the diagnosis and treatment of diseases of the lower urinary tract. Performance of the ultrasound and MRI studies is explained, and the normal and abnormal pathological anatomy is reviewed. Correlation with the ultrasound in the same plane is provided to assist in understanding the MRI sequences. Biopsy and interventional procedures, ultrasound-MRI fusion techniques, and image-guided therapies, including focused ultrasound, photodynamic therapy, microwave and laser ablation, are all fully covered. The third section focuses on securing treatment effectiveness and the use of follow-up imaging to ensure therapeutic success and detect tumor recurrence at an early stage, which is vital given that prompt focal treatment of recurrence is very successful. Here, particular attention is paid to the role of Doppler ultrasound and DCE-MRI technologies. This book will teach beginners the basics of prostate ultrasound and MRI, while more advanced practitioners will learn new skills, means of avoiding pitfalls, and ways of effectively relating the imaging and image-guided treatments to the clinical situation.

**Molecular Diagnostics for Melanoma. Methods and Protocols.***Edited by M. Thurin, F. Marincola.*2014, pp. 712, Eur 149.79, ISBN: 978-1-62703-726-6.  
Springer Science + Business Media, New York, NY, USA.

In this volume, expert researchers and clinicians in the field of melanoma provide updated information on biomarkers and assays for diagnosis, prognosis, and assays predicting response to treatment for routine testing. The focus of the volume is on biomarkers with established clinical validity rather than those on early discovery stage. With additional in-depth discussion of the molecular biology and pathology of melanoma, treatment options in adjuvant and metastatic setting, and implications of biomarker testing for clinical management of melanoma patients. Written in the successful Methods in Molecular Biology series format, chapters include extensive introductions to their respective topics, lists of the

necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Comprehensive and practical, this book seeks to provide both clinicians and scientists with technical information and extensive background information on the wide ranging approaches available in the field of diagnostics of melanoma.

### **Radical Prostatectomy. Surgical Perspectives.**

*Edited by James A. Eastham, Edward M. Schaeffer.*

2014, pp. 215, Eur 149.79, ISBN: 978-1-4614-8692-3.

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

Radical Prostatectomy: Surgical Perspectives provides surgeons with a comprehensive overview of the anatomical approach to radical prostatectomy, whether done through an open (retropubic) or robotic-assisted laparoscopic approach. All chapters are structured to provide a step-by-step approach to the most technically demanding and most common oncologic procedure in urology surgery. The book includes practical presentations of typical surgical patients seen in the clinical practice of urology and relies heavily on illustrations and intra-operative photographs to complement the text. In addition, the book includes a detailed description of the management of uncommon but potentially serious intra-operative complications, including major vascular injury, ureteral transection, and rectotomy. Written by authors from a variety of integrated disciplines, including anesthesia, cardiology, and nursing, this textbook is a valuable resource in the field of urology both for those currently in training and for those already in surgical practices.

### **Tumors of the Central Nervous System. Volume 12. Molecular Mechanisms, Children's Cancer, Treatments, and Radiosurgery.**

*By M.A. Hayat.*

2014, pp. 386, Eur 160.49, ISBN: 978-94-007-7216-8.

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

As in the case of its eleven predecessors in the series, Tumors of the Central Nervous System, this volume provides a detailed examination of leading-edge technology and methods. Volume 12: *Molecular Mechanisms, Children's Cancer, Treatments, and Radiosurgery* offers a comprehensive review of the diagnosis, therapy and prognosis of brain and spinal cord tumors. Coverage extends to a large number of tumor types, including neuroblastoma, medulloblastoma, meningioma and chordoma. Molecular profiling of brain tumors to select appropriate therapy in clinical trials of brain tumors is discussed in detail, as is the classification/diagnosis of brain tumors based on function analysis. CDK6 as the molecular regulator of neuronal differentiation in the adult brain, and the role of aquaporins in human brain tumor growth are explained. Discussion also includes tumors affecting children, including neuroblastoma and medulloblastoma. A full chapter is devoted to the role of molecular genetic alterations in medulloblastoma, and another examines survival differences between children and adults with medulloblastoma. The use of various types of imaging methods to diagnose brain tumors is explained. In-depth discussion

of treatment options includes stereotactic radiosurgery, endoscopic neurosurgery, electrochemotherapy, transsphenoidal surgery, focal ablation, whole brain radiation therapy and re craniotomy.

### **miRNA Maturation. Methods and Protocols.**

*Edited by C. Arenz.*

2014, pp. 192, Eur 101.64, ISBN: 978-1-62703-702-0.

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

*In miRNA Maturation: Methods and Protocols*, expert researchers in the field detail many of the methods which are now commonly used to study miRNA maturation. These include established methods such as fluorescent and non-fluorescent methods for homogenous assays of Dicer-mediated miRNA maturation or an *in vivo* assay for Drosha activity. Moreover, the volume also contains useful, but less-common methods that are hard to find elsewhere. Written in the 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 key tips on troubleshooting and avoiding known pitfalls. This practical book seeks to widen the view on miRNA as biological mediator and potential drug target.

### **Cell Adhesion Molecules. Implications in Neurological Diseases.**

*Edited by V. Berezin, P. Walmod.*

2014, pp. 409, Eur 160.49, ISBN: 978-1-4614-8089-1.

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

This volume contains review articles on recent developments in the field of neural cell adhesion molecules (CAMs). The main focus is on the role of cell adhesion molecules in various neurological and neurodegenerative diseases. This perspective has been overlooked in recently published books on neural CAMs. In addition, the contributors cover many newly identified cell adhesion molecules and some that have not received much attention in recent years. This book fills an important gap in the currently available literature.

### **Drugs Targeting B-Cells in Autoimmune Diseases.**

*Edited by X. Bosch, M. Ramos-Casals, M. Khamashta.*

2014, pp. 292, Eur 149.79, ISBN 978-3-0348-0705-0.

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

This book provides a detailed overview of B-cell directed therapies in patients with rheumatic and systemic autoimmune diseases, including rheumatoid arthritis, systemic lupus erythematosus, Sjögren syndrome, ANCA-associated vasculitis and cryoglobulinemia. Organ-specific autoimmune diseases are discussed with respect to the use of B-cell directed therapies in neurological autoimmune diseases and autoimmune cytopenias. Situations in which B-cell targeted therapy may be indicated are identified, thereby offering comprehensive support for therapeutic decisions on the basis of the latest published evidence. The book also offers a valuable reference tool for rheumatologists, internists,

nephrologists, immunologists, and all specialists involved in the multidisciplinary care of patients with rheumatic and systemic autoimmune diseases.

### **Fundamentals of Pharmaceutical Nanoscience.**

*Edited by I.F. Uchegbu, A.G. Schätzlein, W.P. Cheng, A. Lalatsa.*  
2013, pp. 598, Eur 96.29, ISBN: 978-1-4614-9163-7.  
Springer Science + Business Media, New York, NY, USA.

The emerging discipline of nanoscience has resulted in a number of new technologies. These groundbreaking advances are firing the imagination of a generation of scientists and leading to new materials with a wealth of functionality. In the biomedical sciences these technological advances are finally translating into clinically relevant products and bringing patients exciting new therapies and diagnostics. This is the first book of its kind that seeks to present the application of nanoscience to medicines development - pharmaceutical nanoscience in one accessible volume. The nanotechnologies that derive from pharmaceutical nanoscience are just beginning to make their mark. The book spans the chemistries, which are harnessed to create the materials, the concepts upon which their application rests and model examples of the exploitation of this new knowledge to bring healthcare benefits. A final chapter on the commercialisation pathways taken by these new technologies provides a fitting end to the book as all science is geared towards new knowledge or an improved quality of life through the creation of new interventions, products or services. The book is designed to introduce undergraduates to the technologies underpinning these emerging and existing products, provide a reference volume for graduate scholars seeking an introduction to the fields of pharmaceutical nanoscience and pharmaceutical nanotechnology and provide the expert with accessible information on complementary areas satellite to their main areas of expertise.

### **Cell Death. Mechanism and Disease.**

*Edited by H. Wu.*  
2014, pp. 272, Eur 160.49, ISBN: 978-1-4614-9301-3.  
Springer Science + Business Media, New York, NY, USA.

This book provides a comprehensive view of cell death, from its mechanisms of initiation and execution, to its implication in human disease and therapy. Physiological cell death plays critical roles in almost all aspects of biology, and the book details its roles in lymphocyte homeostasis, neuronal function, metabolism, and the DNA damage response. When physiological cell death goes awry, diseases can arise, and cancer is presented as a central paradigm for the consequences of derangements in the interplay between cell survival and cell death. At the same time, the potential promise of targeted therapies aimed at interdicting cell death machineries are also discussed extensively. The molecular mechanisms that underlie apoptotic cell death are illustrated from the perspectives of both the intrinsic, mitochondrial apoptotic pathway and the extrinsic, death receptor pathway. Key players in these pathways, such as the Bcl2 family proteins, cytochrome c, Apaf-1, caspases, death receptor adapter proteins, and inhibitor of apoptosis proteins, are presented

from both functional and structural angles. Until only a few years ago, programmed cell death has been considered essentially synonymous with apoptosis. However, we now know that programmed cell death can also take other forms such as necrosis or necroptosis, and to this end, the mechanisms that underlie programmed necrosis in development and host defense are illustrated.

### **Bone Metastases. A Translational and Clinical Approach.**

*Edited by D. Kardamakis, V. Vassiliou, E. Chow.*  
2014, pp. 490, Eur 234.33, ISBN: 978-1-4020-9818-8.  
Springer Science + Business Media, New York, NY, USA.

This volume serves as both an introductory and reference book focusing on the field of metastatic bone disease. Featuring contributions from experts in the field, this volume describes the molecular and cellular mechanisms involved in the formation of bone metastases, comments on the role of angiogenesis and presents the newer advances made in the understanding of the clinical picture and symptoms of patients. The role of bone markers in research and clinical practice is also discussed, as well as imaging techniques applied for the detection and evaluation of bone metastases. The book also covers the use of radiotherapy, surgery and systemic treatments for the management of metastatic bone disease and new therapeutic approaches. Overall, this volume may serve as a guide for the clinical and therapeutic management of patients with metastatic bone disease. It can be a great resource for medical researchers, oncologists, orthopaedic surgeons and clinicians.

### **Role of Proteases in Cellular Dysfunction.**

*Edited by Sajal Chakraborti, Naranjan S. Dhalla.*  
2014, pp. 462, Eur 181.89, ISBN: 978-1-4614-9098-2.  
Springer Science + Business Media, New York, NY, USA.

Proteases are found everywhere, in viruses and bacteria as well as in all human, animal and plant cells, and play a role in a variety of biological functions ranging from digestion, fertilization, development to senescence and death. Under physiological conditions the ability of proteases is regulated by endogenous inhibitors. However, when the activity of proteases is not regulated appropriately, disease processes can result, as seen in Alzheimer's disease, cancer metastasis and tumor progression, inflammation and atherosclerosis. Aimed at graduate students and researchers with an interest in cellular proteolytic events, *Role of Proteases in Cellular Dysfunctions* is the second book on Proteases in this series. The book consists of three parts in specified topics based on current literatures for a better understanding for the readers with respect to their subject-wise interests. The first section of this book covers a brief idea about the neuronal disorders and the involvement of proteases such as calpains, caspases and matrix metalloproteases (MMPs). The second section covers the deadly disease cancer and its relation to ubiquitin-proteasomal system, MMPs and serine proteases. The last section is about the role of proteases such as calpains, MMPs and serine protease as well as urokinase type plasminogen activator receptor (uPAR) in causing cardiovascular defects.