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.

Tumors and Tumor-Like Lesions of Bone.

Edited by E. Santini-Araujo, R.K. Kalil, F. Bertoni, Y-K. Park.
2015, pp 994, Eur 213.99, ISBN: 978-1-4471-6577-4.
Springer-Verlag London, UK.

This book provides essential, internationally applicable information in the area of orthopedic pathology with emphasis on practical diagnostic aspects, including many illustrations: roentgenograms, CT-scans, MRI, scintigraphies, as well as pictures of gross surgical specimens and microphotographs, immunohistochemical reactions and genomics. Information on histopathological and molecular diagnosis, and basic therapeutic guidelines are provided.

This book offers generous coverage of epidemiology, clinical features, radiology, pathology, differential diagnosis and treatment, not only for common lesions, but also those less frequently encountered. Clues in the images and histopathology needed to arrive at a sharp differential diagnosis are discussed. The content is arranged based on the World Health Organization's Consensus Classification, with the addition of other lesions not included therein.

The book is aimed at general and specialised surgical pathologists, radiologists, orthopedic surgeons, and oncologists, in practice and in training.

Gastrointestinal Surgery. Management of Complex Perioperative Complications.

Edited by T.M. Pawlik, S.K. Maithel, N.B. Merchant.
2015, pp 484, Eur 203.29, ISBN: 978-1-4939-2222-2.
Springer Science+Business Media, New York, NY, USA.

While surgical management of thoracic, hepato-pancreato-biliary, and colorectal diseases continues to evolve, morbidity continues to be a persistent problem. This book provides a comprehensive, state-of-the art, definitive reference for the diagnosis and management of difficult-to-manage complications following advanced gastrointestinal surgery. All chapters are written by experts in their field and include the most up-to-date clinical information from national and world leaders in their respective discipline. The text provides a practical, clinically useful guide that reviews risk factors for these complications and offers key information on how to avoid potentially high morbidity events in the peri-operative period. It also discusses the management of these problems when they do occur. With its helpful guidelines and "tricks of the trade" to avoid potential complications, this book is essential to all medical professions treating such patients.

This volume is of great value and utility for general surgeons, thoracic surgeons, upper gastrointestinal surgeons, colorectal surgeons, hepato-pancreato-biliary surgeons, surgical oncology fellows, thoracic surgery fellows and upper level residents in general surgery.

Epigenetic Cancer Therapy. Translational Epigenetics Series.

Edited by S.G. Gray.
2015, pp 721. Eur 91.80, ISBN: 978-0-12-800206-3.
Academic Press, Elsevier, San Diego, CA, USA.

Outlining the uses of epigenetics as a therapeutic option in the future management of cancer, this book is an ideal companion for translational researchers and clinicians conducting R&D activities and also for those considering incorporating epigenetic targeting agents into clinical trial protocols.

Key Features:

- Concisely summarizes the therapeutic implications of recent, large-scale epigenome studies, including the cancer epigenome atlas.
- Discusses targeted isoform specific versus pan-specific inhibitors, a rational drug design approach to epigenetics relevant to pharmacoepigenetic clinical applications.
- Covers new findings in the interplay between cancer stem cells (CSCs) and drug resistance, demonstrating that epigenetic machinery is a candidate target for the eradication of these CSCs.

Epigenetic Cancer Therapy unites issues central to a translational audience actively seeking to understand the topic. It is ideal for cancer specialists, including oncologists and clinicians, but also provides valuable information for researchers, academics, students, governments, and decision-makers in the healthcare sector.

The text covers the basic background of the epigenome, aberrant epigenetics, and its potential as a target for cancer therapy, and includes individual chapters on the state of epigenome knowledge in specific cancers (including lung, breast, prostate, liver).

The book encompasses both large-scale intergovernmental initiatives as well as recent findings across cancer stem cells, rational drug design, clinical trials, and chemopreventative strategies. As a whole, the work articulates and raises the profile of epigenetics as a therapeutic option in the future management of cancer.

Genitourinary Pathology. Practical Advances.

Edited by C. Magi-Galluzzi, C.G. Przybycin.
2015, pp 533, Eur 203.29, ISBN: 978-1-4939-2043-3.
Springer Science+Business Media, New York, NY, USA.

This book provides a comprehensive, state-of-the art review of the genitourinary tumor pathology field and the most

contemporary insights regarding specimen submission, histologic morphology, immunohistochemistry, and molecular studies useful in the diagnosis of genitourinary neoplasms. Discussion of the clinical implications of pathological findings is contributed by renowned clinicians in the field. This handsome volume guides the reader through the intricacies of genitourinary tumor pathology, diagnosis, reporting, and prognosis.

Written by experts in the field, *Genitourinary Pathology: Practical Advances* is of great value to anatomic pathologists, urologists, fellows in genitourinary pathology, as well as upper level residents training in pathology.

Neuroendocrine Tumours. Diagnosis and Management.

Edited by S. Yalcin, K. Öberg.
2015, pp 578, Eur 160.49, ISBN: 978-3-662-45214-1.
Springer-Verlag, Berlin, Germany.

This book is a timely textbook that covers all aspects of neuroendocrine tumors (NET) from epidemiology, pathological classification and evaluation and molecular biology through to diagnostic imaging methods and therapeutic options, including the latest targeted therapies. The various types of NET are individually discussed, including carcinoid tumors, insulinomas, gastrinomas, glucagonomas, VIPomas, somatostatinomas, PPomas, medullary thyroid carcinomas, adrenocortical cancer, pheochromocytomas, paragangliomas and non-functioning pancreatic NETs.

The contributing authors are internationally recognized experts who bring a wealth of experience to the subject. This book will be an invaluable source of information for practicing medical oncologists, surgeons, endocrinologists, gastroenterologists and pathologists and also trainees.

The Bethesda System for Reporting Cervical Cytology. Definitions, Criteria, and Explanatory Notes. Third Edition.

Edited by R. Nayar, D. Wilbur.
2015, pp 321, Eur 37.44, ISBN: 978-3-319-11073-8.
Springer International Publishing, Cham, Switzerland.

This book offers clear, up-to-date guidance on how to report cytologic findings in cervical, vaginal and anal samples in accordance with the 2014 Bethesda System Update. The new edition has been expanded and revised to take into account the advances and experience of the past decade. A new chapter has been added, the terminology and text have been updated, and various terminological and morphologic questions have been clarified. In addition, new images are included that reflect the experience gained with liquid-based cytology since the publication of the last edition in 2004. Among more than 300 images, some represent classic examples of an entity while others illustrate interpretative dilemmas, borderline cytomorphologic features or mimics of epithelial abnormalities. The book, with its user-friendly format, is a "must have" for pathologists, cytopathologists, pathology residents, cytotechnologists, and clinicians.

Benign Tumors of the Liver.

Edited by L. Aldrighetti, F. Cetta, G. Ferla.
2015, pp 337, Eur 149.79, ISBN: 978-3-319-12984-6.
Springer International Publishing, Cham, Switzerland.

Diagnosis of benign liver tumors is experiencing exponential growth, mainly owing to the diffusion of more accurate imaging techniques. This monograph examines the epidemiology, histopathology and genetics of these tumors and provides a systematic overview of their evolution and differential diagnosis. Care is taken to document surgical indications accurately, with a view to assisting in the avoidance of useless interventions. Open, laparoscopic and robotic surgical techniques are described and illustrated, emphasizing the optimization of intra- and postoperative management in order to avoid potential complications and degeneration. In these chapters, attention is drawn to the ways in which the surgical management of benign liver tumors differs from that of malignant tumors. The book concludes by examining the role of interventional radiology in patients with benign liver tumors.

Atlas of Clear Cell Carcinoma of the Ovary. A Pathological Guide.

Edited by J. Kigawa, T. Kaku, T. Sugiyama, S.G. Silverberg.
2015, pp 45, Eur 106.99, ISBN: 978-4-431-55437-0.
Springer, Tokyo, Japan.

Clear cell carcinoma (CCC) of the ovary with its unique clinical and biological features has attracted great attention, and calls for the publication of a specialized book on the subject. This is the first atlas that has narrowed its focus to CCC. Revealed here are the typical and variable histological features of CCC and related tumors. Hundreds of high-quality photographs help the reader to recognize the pathological features and clinical manifestations of CCC and to formulate diagnoses confidently and accurately. Data are based on the international central pathological review of the JGOG/GCIG3017 clinical trial in which experts around the world participated. Using a virtual slide system, interesting and significant features of CCC were discovered in the review of 652 cases. This book provides the newest information on the categorization and classification of CCC: growth patterns (papillary, tubocystic, solid, and adenofibromatous), cell types (classical hobnail and clear cell, eosinophilic, oxyphilic, and oncocytic), stromal changes (hyalinized, necrotic, hemorrhagic, lymphocytic infiltrative, luteinized, and psammomatous calcification), presence of endometriosis and atypical endometriosis, and borderline/ atypical proliferative tumors. *The Atlas of Clear Cell Carcinoma of the Ovary* is an invaluable diagnostic resource for pathologists and gynecologic oncologists.

Absolute Dermatology Review.
Edited by H.M. Gloster Jr, L.E. Gebauer, R.L. Mistur.
2015, pp 534, Eur 160.49, ISBN: 978-3-319-03217-7.
Springer International Publishing, Cham, Switzerland.

Absolute Dermatology Review provides a thorough, concise review of clinical images of the specific conditions that the reader will be required to recognize during the American Board of Dermatology recertification test. In addition, concise key clinical features for each image will be provided that will assist the reader in recognizing the clinical images on the examination, enabling them a more efficient way to study for the test without having to look up images online or in a large text book. Written by a board certified dermatologic surgeon who recently took the recertification exam, this book proves indispensable to dermatologists taking the exam or residents who want a quick reference of the clinical appearances of the main conditions generally encountered by a dermatologist.

Pancreatic Neuroendocrine Neoplasms. Practical Approach to Diagnosis, Classification, and Therapy.
Edited by S. La Rosa, F. Sessa.
2015, pp 195, Eur 85.59, ISBN: 978-3-319-17234-7.
Springer International Publishing, Cham, Switzerland.

This book provides a broad overview of pancreatic neuroendocrine neoplasms, focusing on the most important developments in the technologies used to diagnose, classify and treat them. After a historical and epidemiological overview, the opening chapters examine the various diagnostic approaches (radiology, nuclear medicine, endocrinology, cytology and immunohistochemistry) and discuss the WHO classification. The functioning and nonfunctioning tumor types are then fully discussed, covering epidemiology, diagnosis, morphology and prognosis of each entity. Careful consideration is given to the molecular features that have contributed in understanding the pathogenesis of such neoplasms and may have potential implications for the diagnostic and therapeutic pathways. The final chapters consider the surgical and medical approaches to therapy, providing a practical and analytical overview of the available options. The book is written by a multidisciplinary team of worldwide-recognized experts and is addressed to radiologists, nuclear medicine physicians, endocrinologists, pathologists, surgeons and oncologists.

Cell Therapy for Brain Injury.
Edited by D.C. Hess.
2015, pp 369, Eur 149.79, ISBN: 978-3-319-15062-8.
Springer International Publishing, Cham, Switzerland.

This is a review of state-of-the-art cell therapy in the treatment of stroke, traumatic brain injuries and neonatal stroke and hypoxia-ischemia using a variety of cells ranging from bone marrow derived stem cells and mesenchymal stem cells to induced pluripotent stem cells derived neural progenitors. This invaluable book covers this niche topic in depth from basic stem cell biology and principles of cell therapy through proposed mechanisms of action of cell therapy in stroke, pre-clinical data in stroke models, ongoing clinical trials, imaging and tracking of cells with MRI, neural stem cells in stroke, approaches using conditioned medium, and the "big pharma" perspective of cell therapy. Each of eighteen chapters has been contributed by a well-known leader in each field, thus providing a wealth of international perspective and expertise. *Cell Therapy for Brain Injury's* breadth makes it essential reading for neuroscientists, stem cell biologists, researchers or clinical trialists at pharmaceutical or biotechnology companies. It also serves as a thorough introduction for graduate students or post-doctoral fellows who hope to work in these fields.

Diagnosis and Management of Testicular Cancer. The European Point of View.
Edited by S. Krege.
2015, pp 135, Eur 64.19, ISBN: 978-3-319-17466-2.
Springer International Publishing, Cham, Switzerland.

This book presents the views of leading European experts on the diagnosis and management of testicular cancer, with coverage of current hot topics in the field. It opens by providing an overview of the recommendations in the most recent consensus paper from the European Germ Cell Cancer Consensus Group, which is based on interdisciplinary cooperation among urologists, medical oncologists, radio-oncologists, pathologists, and basic scientists. The remainder of the book focuses on areas of controversy in the diagnosis, treatment, and follow-up of testicular cancer. In each case the evidence base is discussed and results from the most recent studies are reviewed, drawing attention to new findings that might alter treatment recommendations. The treatment-related chapters cover a broad range of issues, including the best approach in patients with poor-prognosis and recurrent disease and those with long-term toxicities. Relevant aspects of survivorship care are also addressed. The book will help clinicians and practitioners to achieve the goals of minimizing therapy and its side-effects without reducing efficacy in low stage disease, improving the cure rate in advanced disease, and enhancing follow-up and long-term survivorship.

Laparoscopic Gastrectomy for Gastric Cancer.
Edited by C.-M. Huang, C.-H. Zheng.
2015, pp 344, Eur 149.79, ISBN: 978-94-017-9872-3.
Springer Science+Business Media, Dordrecht, the Netherlands.

This book presents surgical techniques and detailed illustrations of laparoscopic gastrectomy for gastric cancer, focusing on effective, concise steps and techniques. It describes in detail the perigastric anatomy, and the incidences of each anatomical structure are analyzed statistically. It also discusses lessons learned and best practices in the management of gastric cancer patients, and includes video captures of precise operational techniques - essential resources for gastrointestinal laparoscopic surgeons. Given its close connection to clinical practice, it offers a valuable reference work for general surgeons and residents.

Applied Statistics in Biomedicine and Clinical Trials Design.

Edited by Z. Chen, L. Aiyi, Y. Qu, L. Tang, N. Ting, Y. Tsong.
2015, pp 546, Eur 203.29, ISBN: 978-3-319-12693-7.
Springer International Publishing, Cham, Switzerland.

This volume is a unique combination of papers that cover critical topics in biostatistics from academic, government, and industry perspectives. The 6 sections cover Bayesian methods in biomedical research; Diagnostic medicine and classification; Innovative Clinical Trials Design; Modelling and Data Analysis; Personalized Medicine; and Statistical Genomics. The real world applications are in clinical trials, diagnostic medicine and genetics. The peer-reviewed contributions were solicited and selected from some 400 presentations at the annual meeting of the International Chinese Statistical Association (ICSA), held with the International Society for Biopharmaceutical Statistics (ISBS). The conference was held in Bethesda in June 2013, and the material has been subsequently edited and expanded to cover the most recent developments.

Genome Mapping and Genomics in Human and Non-Human Primates.

Edited by R. Duggirala, L. Almasy, S. Williams-Blangero, S.F.D. Paul, C. Kole.
2015, pp 305, Eur 149.79, ISBN: 978-3-662-46305-5.
Springer-Verlag, Berlin, Germany.

This book provides an introduction to the latest gene mapping techniques and their applications in biomedical research and evolutionary biology. It especially highlights the advances made in large-scale genomic sequencing. Results of studies that illustrate how the new approaches have improved our understanding of the genetic basis of complex phenotypes including multifactorial diseases (e.g., cardiovascular disease, type 2 diabetes, and obesity), anatomic characteristics (e.g., the craniofacial complex), and neurological and behavioral phenotypes (e.g., human brain structure and nonhuman primate behavior) are presented.

Topics covered include linkage and association methods, gene expression, copy number variation, next-generation sequencing, comparative genomics, population structure, and a discussion of the Human Genome Project. Further included are discussions of the use of statistical genetic and genetic epidemiologic techniques to decipher the genetic architecture of normal and disease-related complex phenotypes using data from both humans and non-human primates.

Chromatin Protocols. Third Edition.

Edited by S.P. Chellappan.
2015, pp 492, Eur 117.69, ISBN: 978-1-4939-2473-8.
Springer Science+Business Media, New York, NY, USA.

Updated and revised, this thorough volume is organized such that it begins with techniques related to the study of chromatin structure. Protocols for reconstitution of chromatin on solid supports for analysis, preparation of positioned mononucleosomes, techniques to study premature chromatin condensation and the use of comparative genomic hybridization to assess genomic aberration are included as well. Novel techniques for imaging chromatin using atomic force microscopy and the isolation of specific genomic regions using engineered DNA binding molecules generated by CRISPR are then examined. That section is followed by protocols to analyze DNA and histone modifications, while the third section includes methods to study DNA replication and repair, in the context of chromatin. Last but not least, protocols for studying chromatin and its relation with transcriptional regulation are presented in a fourth section. 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.

Authoritative and up-to-date, this volume aims to help researchers in facilitating in-depth molecular analysis of various aspects of chromatin structure and function.

Cell Fusion. Overviews and Methods. Second Edition.

Edited by K. Pfannkuche.
2015, pp 248, Eur 101.64, ISBN: 978-1-4939-2702-9.
Springer Science+Business Media, New York, NY, USA.

This volume details protocols on detection and analysis of fusion events in various cell types in vitro and in vivo. Additional, protocols aim to facilitate the future highly relevant process of engineering cells for specific purposes, such as generation of transgenic embryos and development of hybrid cells, in order to tackle specific tasks in cell biology and medicine. Written for the Methods in Molecular Biology series, 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.

Practical and authoritative, this volume serves as an ideal reference on cell fusion and laboratory protocols.

Protein-Protein Interactions. Methods and Applications. Second Edition.

Edited by C.L. Meyerkord, H. Fu.
2015, pp 620, Eur 133.74, ISBN: 978-1-4939-2424-0.
Springer Science+Business Media, New York, NY, USA.

The second edition covers a wide range of protein-protein interaction detection topics. This volume focuses on core technological platforms used to study protein-protein interactions and cutting-edge technologies that reflect recent scientific advances and the emerging focus on therapeutic discovery. Written in the highly successful Methods in

Molecular Biology series format, chapters include introductions to their respective topics, lists of necessary materials and reagents, step-by-step laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. These well-detailed protocols describe methods for identifying protein-protein interaction partners, analyzing of protein-protein interactions quantitatively and qualitatively, monitoring protein-protein interactions in live cells, and predicting and determining interaction interfaces.

Authoritative and cutting-edge, *Protein-Protein Interactions: Methods and Applications, Second Edition* is a valuable resource that will enable readers to elucidate the mechanisms of protein-protein interactions, determine the role of these interactions in diverse biological processes, and target protein-protein interactions for therapeutic discovery.

Histone Recognition.
Edited by M.-M. Zhou.
2015, pp 282, Eur. 149.79, ISBN: 978-3-319-18101-1.
Springer International Publishing, Cham, Switzerland.

This book provides a timely review of the role of histone modifications in epigenetic control of gene expression. Topics covered include: basic mechanisms of molecular recognition of histone post-translational modification (PTMs); combinatorial readout of histone PTMs by tandem epigenome reader domains; genome-wide profiling of histone PTM interactions; small molecule modulation of histone PTM interactions and their potential as a new approach to therapeutic intervention in human diseases. All chapters were written by leading scientists who made the original key discoveries of the structure and mechanism of evolutionarily conserved reader domains, which serve to direct gene transcription in chromatin through interactions with DNA-packing histones in a PTM-sensitive manner.

Next Generation Sequencing in Cancer Research, Volume 2.
From Basepairs to Bedsides.
Edited by W. Wu, H. Choudhry.
2015, pp 493, Eur 181.89, ISBN: 978-3-319-15810-5.
Springer International Publishing, Cham, Switzerland.

Latest generation sequencing revolutionizes the fields of cancer research and oncology. This follow-up volume focuses more extensively on single cell sequencing of cancer and trials in drug resistance. Another exciting feature is the bioinformatics tools given, that can be used on cancer genome studies. Scientists around the world are attempting to find the root cause of cancer. A reasonable cancer treatment plan and potential cure is more optimistic now with the unfolding of the cancer genome. The collective knowledge of how to leverage next generation sequencing in cancer research is paving the way. The important information provided in this volume will move the field forward in developing novel targeted cancer therapies.

DNA Replication. Methods and Protocols.
Edited by S. Vengrova, J. Dalgaard.
2015, pp 295, Eur 101.64, ISBN: 978-1-4939-2595-7.
Springer Science+Business Media, New York, NY, USA.

Updated and revised, this thorough volume covers a range of methods focusing on systems, including mammalian, yeast, bacterial and archaeal. This second edition of DNA Replication: Methods and Protocols describes approaches to analyze whole genomes to single molecules, as well as both in vivo and in vitro experiments. As a volume in the highly successful Methods in Molecular Biology series, chapters contain 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.

Authoritative and cutting-edge, this volume provides a collections of methods intended for newcomers to this research field and for established laboratories.

Pulse Field Gel Electrophoresis. Methods and Protocols.
Edited by K. Jordan, M. Dalmasso.
2015, pp 278, Eur 101.64, ISBN: 978-1-4939-2598-8.
Springer Science+Business Media, New York, NY, USA.

This volume will be of interest to epidemiologists, food microbiologists, and anyone working on comparing bacterial isolates. Pulse Field Gel Electrophoresis: Methods and Protocols guides readers through methods and protocols that will advance the harmonisation of PFGE methodologies and facilitate inter-laboratory comparisons of PFGE profiles from pathogenic and non-pathogenic bacteria. As a volume in the highly successful Methods in Molecular Biology series, chapters contain 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.

Concise and easy-to-use, *Pulse Field Gel Electrophoresis: Methods and Protocols* aims to ensure successful results in the further study of this vital field.

Tumor Cell Metabolism. Pathways, Regulation and Biology.
Edited by S. Mazurek, M. Shoshan.
2015, pp 372, Eur 149.79, ISBN: 978-3-7091-1823-8.
Springer-Verlag, Wien, Austria.

The four sections of this book cover cell and molecular biology of tumor metabolism, metabolites, tumor microenvironment, diagnostics and epigenetics. Written by international experts, it provides a thorough insight into and understanding of tumor cell metabolism and its role in tumor biology. The book is intended for scientists in cancer cell and molecular biology, scientists in drug and diagnostic development, as well as for clinicians and oncologists.

Resistance to Aromatase Inhibitors in Breast Cancer.
Edited by A. Larionov.
2015, pp 288, Eur 149.79, ISBN: 978-3-319-17971-1.
Springer International Publishing, Cham, Switzerland.

Aromatase Inhibitors (AIs) treat postmenopausal estrogen receptor positive tumours, which constitute the majority of breast cancer patients. This comprehensive volume brings together the current knowledge from different relevant areas, including molecular mechanisms and translational aspects of drug resistance in AIs. Topics covered include research, experimental , and clinical data specifically focused on AI resistance in breast cancer. The volume will include three sections. The first section covers general knowledge about aromatase inhibitors, including regulation of aromatase genes, and structure and function of aromatase protein. The second section provides the detailed mechanisms of resistance to AIs, while the third section explores prediction of resistance and potential strategies to overcome resistance. Breast cancer is the most common female cancer and AIs significantly improve treatments outcomes compatibly to previously used endocrine treatments. However 10-15% of post-operative patients develop a relapse during adjuvant treatment with AIs; about 25-50% of the patients do not respond to AIs in neo-adjuvant or metastatic setting, and the majority of metastatic patients who initially respond develop resistance within 3 years. There is an important need to understand these mechanisms of resistance in order to develop methods of preventing or overcoming the resistance to AIs, which will ensure a more successful outcome in treating breast cancer.

Principles of Tumors. A Translational Approach to Foundations.
By L.P. Bignold.
2015, pp 458, Eur 83.10, ISBN: 978-0-12-801565-0.
Academic Press, Elsevier, London, UK.

This volume provides a unique approach, integrating a wide range of basic bioscience findings with clinico-pathological observations and phenomena encountered in their treatment. As tumors are studied in fairly separate, broad areas, such as basic biological sciences, pathology, oncology, and epidemiology, this book brings together these perspectives, providing an all-inclusive text that benefits all researchers, while also providing an avenue for translational research.

Key Features:

- Integrates both cell mechanisms and tumor physiopathology
- Brings together research and perspectives from basic biological sciences, pathology, oncology, and epidemiology, providing an all-inclusive text
- Provides a concise tumor reference for the tumor researcher and oncologist
- Includes appendices for foundational material
- Brings out the cell detail of tumors

Cancer Immunology. Cancer Immunotherapy for Organ-Specific Tumors.
Edited by N. Rezaei.
2015, pp 488, Eur 203.29, ISBN: 978-3-662-46409-0.
Springer-Verlag, Berlin, Germany.

Cancer Immunology is intended as an up-to-date, clinically relevant review of cancer immunology and immunotherapy. This volume focuses on the immunopathology and immunotherapy of organ cancers in detail. It clearly explains their immunology and describes novel immunotherapy for specific cancers, including pediatric solid tumors, hematologic malignancies, gastrointestinal tumors, skin cancers, bone and connective tissue tumors, central nervous system tumors, lung cancers, genitourinary tract tumors and breast cancers. In so doing, it builds on the previous two volumes in Cancer Immunology, placing basic knowledge on tumor immunology and immunotherapy into a clinical perspective with the aim of educating clinicians on advances in cancer immunology and the most recent approaches in the immunotherapy of various tumors. This translational, clinically oriented book will be of special value to clinical immunologists, hematologists and oncologists.

Stem Cell Renewal and Cell-Cell Communication. Methods and Protocols.
Edited by K. Turksen.
2015, pp 210, Eur 101.64, ISBN: 978-1-4939-2589-6.
Springer Science+Business Media, New York, NY, USA.

This volume examines cell-cell interactions and stem cell renewal, two topics that are now inexorably linked as science strives to understand the stem cell niche and its function. Gathering a number of representative protocols, this detailed collection promises to provide readers with approaches for studying these complimentary aspects of stem cells. Written for the highly successful Methods in Molecular Biology series, chapters include brief 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.

Practical and reliable, *Stem Cell Renewal and Cell-Cell Communication: Methods and Protocols* will aid researchers in using these methods to advance their own studies.

Stem Cell Biology in Neoplasms of the Central Nervous System.
Edited by M. Ehtesham.
2015, pp 190, Eur 149.79, ISBN: 978-3-319-16536-3.
Springer International Publishing, Cham, Switzerland.

This volume examines various aspects of experimental research on stem cell biology of neoplasms of the central nervous system, including neuro-oncogenesis, cell migration, isolation, role and characterization of stem cells, chemoresistance and chemotherapy targeting stem cells in malignant glioma, radiation therapy for glioma stem cells, immunobiology and immunotherapeutic targeting of glioma stem cells.

Bioinformatics. An Introduction. Third Edition.
By J. Ramsden.
2015, pp 308, Eur 64.19, ISBN: 978-1-4471-6701-3.
Springer-Verlag, London, UK.

Topics and features:

- Explains the fundamentals of information science relevant to biology, discussing set theory, combinatorics, probability, likelihood, clustering, pattern recognition, randomness, complexity, systems, and networks
- Covers both organismal (ontogeny and phylogeny, as well as genome structure) and molecular aspects
- Critically examines the most important practical applications of bioinformatics, providing detailed descriptions of both the experimental process and the analysis of the data
- Provides a varied selection of problems throughout the book, to stimulate further thinking
- Contains an extensive bibliography offering a guide to further reading and to the latest reported research

Combining the successful formula of the previous editions with significantly enhanced new content, this textbook serves as a complete study companion for undergraduates and the beginning graduate student. With its invaluable insights into the state-of-the-art of bioinformatics, the book is also ideal for physical scientists seeking a succinct guide to biology, and for biological scientists wishing to better understand the physicochemical and mathematical aspects underpinning the applications.

Nanotechnology-Based Precision Tools for the Detection and Treatment of Cancer.
Edited by C.A. Mirkin, T.J. Meade, S.H. Petrosko, A.H. Stegh.
2015, pp 322, Eur 149.79, ISBN: 978-3-319-16554-7.
Springer International Publishing, Cham, Switzerland.

This book discusses emerging nanotechnology-based tools that have the potential to dramatically impact cancer research, diagnostics, and treatment. Cancer is a complex, devastating, and debilitating disease and, although much progress has been made, novel, more effective diagnostic and treatment options are still needed, especially for advanced cancers. The ultimate goal is to detect cancer early and non-invasively and to provide efficacious and targeted precision treatments that cause fewer harmful side effects. This book explains how nanotechnology can exploit the size-, shape-, and composition-dependent properties of nanomaterials to provide novel tools for precision cancer medicine. It will be of interest to researchers and professionals working in the fields of chemistry, biology, materials science and engineering, and medicine who want to learn more about this fascinating and fast-paced area of research.

Nitric Oxide and Cancer: Pathogenesis and Therapy.
Edited by B. Bonavida.
2015, pp 308, Eur 160.49, ISBN: 978-3-319-13610-3.
Springer International Publishing, Cham, Switzerland.

This volume provides the latest research and applications of nitric oxide (NO) in cancer written by experts in the field. The volume reviews significant advances in the biochemical and molecular biology of NO-mediated effects in cancer. Additionally, it explores NO and its relationship to cancer, delineating its roles in the pathogenesis, prognosis, gene and protein modifications, regulation of resistance to cytotoxic drugs and immunotherapies, and potential therapeutic applications. *Nitric Oxide and Cancer* addresses the burgeoning interest in a rapidly advancing field, and serves as both a valuable resource for scientists, clinicians, students, and health professionals and a reference for teaching and educational purposes.

Pain Control.
Edited by H.-G. Schaible.
2015, pp 309, Eur 330.63, ISBN: 978-3-662-46449-6.
Springer-Verlag, Berlin, Germany.

This volume addresses neuronal pain mechanisms at the peripheral, spinal and supraspinal level which are thought to significantly contribute to pain and which may be the basis for the development of new treatment principles. Chapters on nociceptive mechanisms in the peripheral nociceptive system address the concept of hyperalgesic priming, the role of voltage-gated sodium channels in different inflammatory and neuropathic pain states, the hyperalgesic effects of NGF in different tissues and in inflammatory and neuropathic pain states, and the contribution of proteinase activated receptors (PAR) to the development of pain in several chronic pain conditions. Chapters on nociceptive mechanisms in the spinal cord address the particular role of NO and of glial cell activation in the generation and maintenance of inflammatory and neuropathic pain and it discusses the potential role of local inhibitory interneurons, of the endogenous endocannabinoid system and the importance of non-neuronal immune mechanisms in opioid signaling in the control of pain. Furthermore, it is presented how spinal mechanisms contribute to the expression of peripheral inflammation.

The Future of HIV-1 Therapeutics. Resistance Is Futile?
Edited by B. Torbett, D.S. Goodsell, D. Richman.
2015, pp 254, Eur 149.79, ISBN: 978-3-319-18517-0.
Springer International Publishing, Cham, Switzerland.

This volume thoroughly covers HIV-1 antiretrovirals currently in clinical use, together with their advantages and limitations. HIV-1 inhibitor resistance is discussed in detail, and critical assessments as to what will be required of future antiretrovirals in order to halt viral replication, reduce viral resistance, and alter the state of viral latency are presented. Experts at the forefront of HIV-1 research provide overviews of approaches from the fields of virology, chemical biology and structural biology for obtaining small molecule inhibitors that target viral regulatory and structural components at multiple points in the viral lifecycle. The individual chapters will appeal to scientists and clinicians alike.

Intensity-Modulated Radiation Therapy. Clinical Evidence and Techniques.

Edited by Y. Nishimura, R. Komaki.

2015, pp 473, Eur 203.29, ISBN: 978-4-431-55485-1.
Springer, Tokyo, Japan.

Successful clinical use of intensity-modulated radiation therapy (IMRT) represents a significant advance in radiation oncology. Because IMRT can deliver high-dose radiation to a target with a reduced dose to the surrounding organs, it can improve the local control rate and reduce toxicities associated with radiation therapy. Since IMRT began being used in the mid-1990s, a large volume of clinical evidence of the advantages of IMRT has been collected. However, treatment planning and quality assurance (QA) of IMRT are complicated and difficult for the clinician and the medical physicist. This book, by authors renowned for their expertise in their fields, provides cumulative clinical evidence and appropriate techniques for IMRT for the clinician and the physicist. Part I deals with the foundations and techniques, history, principles, QA, treatment planning, radiobiology and related aspects of IMRT. Part II covers clinical applications with several case studies, describing contouring and dose distribution with clinical results along with descriptions of indications and a review of clinical evidence for each tumor site. The information presented in this book serves as a valuable resource for the practicing clinician and physicist.

Mistletoe: From Mythology to Evidence-Based Medicine.

Edited by K.S. Zänker, S.V. Kaveri.

2015, pp 84, Eur 75.45, ISBN: 978-3-318-05444-6.
S. Karger, AG, Basel, Switzerland.

Since ancient times the mistletoe plant has been used for healing diseases. Today mistletoe extract therapy is among the most thoroughly studied complementary treatments in Europe. Several studies and meta-analyses have shown it to be beneficial for cancer patients in terms of survival, improved quality of life and minimised side effects of cancer chemotherapy.

This book gives an overview of the research on mistletoe therapy from antiquity to the present. Topics discussed include the cultural and medical history of mistletoe, the diversity of the plant´s molecular constituents, and its anticancer activities including cytotoxicity and immunomodulation. A timeline of the development of mistletoe research is presented. Special attention is given to the application of mistletoe extracts as a supportive treatment in glioblastoma, after cancer surgery and in cancer-related fatigue.

This timely publication is a treasure trove for oncologists devoted to a holistic tumor therapy, caregivers of cancer patients, pharmacologists interested in phytomedicine and medical historians.

Focal Therapy of Prostate Cancer. An Emerging Strategy for Minimally Invasive, Staged Treatment.

Edited by S. Thüroff, C.G. Chaussy.

2015, pp 145, Eur 85.59, ISBN: 978-3-319-14159-6.
Springer International Publishing, Cham, Switzerland.

This book provides a 2015 state of the art update on the hot topic of focal prostate cancer therapy, which offers a means of preserving the prostate and avoiding major side-effects associated with conventional treatment strategies. In so doing, focal therapy meets the desire of many patients, especially those with low-risk disease, to avoid or postpone radical therapies in order to preserve quality of life. A wide range of aspects are covered, including the role of imaging-guided targeted biopsies, the pros and cons of surveillance in comparison with focal therapy, focal hemiablation and focal salvage therapy, multifocal therapies, focal cryotherapy. The potential role of various new diagnostic technologies as well as specific therapeutic devices as "Focal.One" robotic high-intensity focused ultrasound are explained. The authors are all international experts who are long-term proponents of non-invasive treatment of prostate cancer. "Focal Therapy of Prostate Cancer" will be an invaluable source of information for urologists, oncologists, radiation oncologists, and general practitioners, and also for patients wishing to learn more about this new treatment option.

Respiratory Carcinogenesis.

Edited by M. Pokorski.

2015, pp 73, Eur 106.99, ISBN: 978-3-319-16921-7.
Springer International Publishing, Cham, Switzerland.

The book blends basic and clinical research on respiratory carcinogensis. The contributions tackle a variety of respiratory-related cancers, notably non-small cell lung carcinoma, pleural mesothelioma, mediastinal tumors, or larynx cancer. The focus is on the search for novel molecular markers, derived from easily accessible tissues in clinical settings, such as the serum or bronchoalveolar lavage fluid, which could help diagnose cancer at an early stage and have a prognostic therapeutic value. The transcriptional mechanisms which endow cells with the capacity for unlimited proliferation are considered, with silencing of tumor suppressor genes is the exemplar. Chapters provide insight into a variety of cancer-related disorders of the respiratory tract, novel ways of differential diagnosis and treatment. The aim is to bring the current clinical procedures into alignment with the latest basic research findings. The book is a text for respiratory researchers, clinicians, and pathologists.

Synthesis and Vaccine Evaluation of the Tumor Associated Carbohydrate Antigen RM2 from Prostate Cancer.

By H.-Y. Chuang.

2015, pp 108, Eur 85.59, ISBN: 978-3-662-46847-0.
Springer-Verlag, Berlin, Germany.

This thesis focuses on the synthesis and vaccine evaluation of the prostate tumor- associated carbohydrate antigen RM2. The author first presents the use of the [1+2+3] one-pot sequential strategy to successfully synthesise the RM2 antigen and its analogues as single stereoisomers in every glycosylation step, producing good yields and stereoselectivity. He then introduces

the conjugation of the synthetic RM2 antigen to the carrier protein CRM197 in an average number of 1–10 to create the prostate cancer vaccine candidate, which is combined with α-galactosylceramide C1, its analogue C34, or Alu. The results of the vaccination studies in mice are also described and indicate that the strongest anti-RM2 antigen titer is exhibited when one molecule of diphtheria toxin (DT) is conjugated with an average of 4.7 molecules of RM2 antigen (DT-RM4.7) and adjuvanted with the glycolipid C34. More importantly, the induced mouse antibodies mediate the effective complement-dependent cytotoxicity (CDC) against the prostate cancer cell line LNCap. The study presented in this thesis is the first ever to successfully synthesize this complex glycan molecule. Owing to the steric hindrance of the adjacent sialyl moiety, the introduction of two sialic acid units to the compact and rigid 3,4 di branched galactoside unit is very challenging and the β-selective and efficient glycosylation of the galactosamine moiety at the 4-position of di branched galactose is also problematic.

Breast Cancer, Fertility Preservation and Reproduction.

Edited by N. Biglia, F.A. Peccatori.
2015, pp 102, Eur 64.19, ISBN: 978-3-319-17277-4.
Springer International Publishing, Cham, Switzerland.

This book provides a comprehensive overview on issues surrounding fertility in patients who have been diagnosed with breast cancer or belong to a high-risk population. The impact of breast cancer treatment on fertility is clearly explained and all the available options for fertility preservation are discussed, including the use of assisted reproduction technologies. Guidance is offered on family planning and on management options when breast cancer arises during pregnancy and when pregnancy occurs after breast cancer. Answers are provided to a wide range of key questions, including: What is the impact of pregnancy after breast cancer on prognosis? What advice should be given on the timing of pregnancy in relation to chemotherapy and endocrine treatment? What is the effect of reducing the duration of endocrine treatment to allow an earlier attempt at pregnancy? Is breast feeding possible? Medical treatments of breast cancer have a huge impact on fertility. While many procedures can be applied to preserve fertility, all must be put into action within the very short time available before starting treatment. Any delay in referral of a woman wishing to preserve her fertility to an ART center with experience in oncologic patients may preclude the possibility of a future pregnancy. In addition, an increasing number of high-risk patients are asking questions about their reproductive life, from choice of contraception to the risks of assisted reproduction techniques. Physicians will find this book an invaluable aid in providing flawless counseling to their patients and ensuring that they receive optimal management.