

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.

The Genetics and Molecular Biology of Neural Tumors.

By A.A. Sandberg, J.F. Stone.
2008, pp. 450, Euro 133.70, ISBN: 978-1-994115-58-9.
Humana Press, Totowa, NJ, USA.

Collecting an extensive amount of information from thousands of publications by leading investigators in this rapidly developing field, this volume provides a convenient and up-to-date one volume source for research in neural tumors of various cellular origins. Each chapter, with a comprehensive list of references and many informative tables, contains clinical and epidemiologic information, as well as succinct but relevant patho-histologic and immunohistochemical descriptions facilitating the interpretation of the findings on tumor genetics and molecular biology. With over 3,500 references, 110 figures and 120 tables, this volume gathers an astonishing body of knowledge regarding human neural tumors. As a ready and concentrated source, *The Genetics and Molecular Biology of Neural Tumors* is the perfect reference for busy clinicians, clinical investigators and laboratory researchers struggling through the copious and far-spread research on this subject.

Contents: Benign Peripheral Nerve Sheath Tumors: Neurofibromas, Schwannomas and Perineuriomas. Malignant Peripheral Nerve Sheath Tumors. Meningioma. Hemangioblastoma of the Central Nervous System. Paranglioma and Pheochromocytoma. Atypical Teratoid/Rhabdoid Tumors of the Central Nervous System. Neuroblastoma and Related Tumors. Medulloblastoma, Primitive Neuroectodermal Tumors and Pineal Tumors. Key Mechanisms and Pathways. Index.

Atlas of Differential Diagnosis in Neoplastic Hematopathology.

2nd Edition.
By W. Gorczyca with F.N. Emmons.
2008, pp. 680, ISBN: 9-780415-461856.
Informa Healthcare, London, UK.

This atlas is an updated bestselling comprehensive reference guide for neoplastic hematopathology. Over 600 color illustrations depict morphology, immunophenotype, chromosomal and genetic characteristics of hematopoietic tumors involving lymph nodes, spleen, bone marrow, blood and commonly affected extranodal organs (for example GI tract, lung/mediastinum, skin and salivary

gland), with special emphasis on the differential diagnosis. The clearly written text discusses morphologic, immunophenotypic, chromosomal and molecular data, with algorithms and numerous tables summarizing the phenotypic profiles of the most common hematologic tumors. A major feature of this book is a multimethodologic approach to the diagnosis of hematologic neoplasia based on the most current classifications, with relevant examples and emphasis on the most useful morphologic and phenotypic features used in diagnosis, monitoring and prognosis.

This is an essential guide to the diagnosis and differential diagnosis of neoplastic hematopathology based on pattern recognition and on the most appropriate methodologic parameters. There are new and significantly updated sections on differential diagnosis, on morphology, chromosomal and genetic changes, and localization. It will be an invaluable reference for all practicing hematopathologists, pathologists, hematologists, oncologists, as well as physicians in training and technologists involved in flow cytometry, cytogenetics and hematology.

Molecular Imaging in Oncology.

Edited by M.G. Pomper, J.G. Gelovani.
2008, pp. 718, ISBN: 9-780849-374173.
Informa Healthcare, London, UK.

This textbook is the first comprehensive reference on molecular imaging in oncology. The volume covers instrumentation and techniques, cancer imaging, probe design, molecular genetic imaging, cellular processes, clinical translation. Filled with over 500 images of which more than 50 are in color, illustrating diagnostic and therapeutic capabilities of molecular imaging in cancer, this text outlines all procedures for the radiologists, radiology physicists, and radiation oncologists in a concise single-source guide.

Human Cancer Viruses. Principles of Transformation and Pathogenesis.

Edited by J. Nicholas, K.-T. Teang, T.-C. Wu.
2008, pp. 244, Euro 151.50, ISBN: 978-3-8055-8576-7.
S. Karger AG, Basel, Switzerland.

The first identification of a tumor-causing virus, Rous sarcoma virus, occurred almost 100 years ago, but it was not until the 1970s that the genetic basis for oncogenesis by this and other acutely transforming retroviruses was appreciated. Since then, numerous viral oncogenes and their corresponding cellular proto-oncogene counterparts have been identified, and these studies have contributed much to our understanding of crucially important aspects of cell biology and transformation.

This book provides an up-to-date overview of the 6 major viruses that cause human cancers – HPV, HBV, HCV, EBV, KSHV and HTLV-1 – with respect to their molecular biology and epidemiology and to clinical aspects of disease, therapy and prevention. Contributed by over a dozen internationally renowned scientists, the chapters are comprehensively written and illustrated. The book is suitable for advanced students, postdoctoral researchers, scientists and clinicians who wish to

understand the mechanisms leading to cellular transformation and oncogenesis by these viruses as a basis for the development of specific therapeutic and antiviral treatments.

EGFR Signaling Networks in Cancer Therapy.

Edited by J.D. Haley, W.J. Gullick.

2008, pp. 393, Euro 114.95, ISBN: 978-1-58829-948-2.
Humana Press, Totowa, NJ, USA.

The epidermal growth factor (EGF) receptor and its downstream signal transduction networks have been implicated in the ontology and maintenance of tumor tissues, which has motivated the discovery and development of molecularly targeted anti-EGFR therapies. This volume is separated into two sections, the first of which probes the molecular pathways and the intersection of signaling networks which are frequently deregulated in human cancers, with a view to describing EGF receptor in a tumor tissue specific context. The second section illustrates the many ways in which EGF receptor contribute to abnormal survival and migration signaling in cancer cells and to epithelial to mesenchymal transition and metastasis. The book also describes the mitogenic, survival, adhesive and migratory pathways within a framework of interacting subsystems that contribute to the activity and physiological regulation of the receptor in normal and neoplastic tissues. Even though there is still much to learn, this volume explores this fascinating system with compelling information.

Gene Therapy Protocols. Third Edition. Volume 1: Production and *In Vivo* Applications of Gene Transfer Vectors. Volume 2: Design and Characterization of Gene Transfer Vectors.

Edited by J.M. Le Doux.

2008, pp. 699, US\$199.00 (Vol. 1 & 2), ISBN: 978-1-588-29-903-1 (Vol. 1); 978-1-603-27-247-6 (Vol. 2).
Humana Press, Totowa, NJ, USA.

The field of gene therapy has undergone remarkable advances, promising to impact human healthcare significantly in the twenty-first century. Today's technologies can deliver genetic material safely and effectively to cells to slow or halt the progression of disease, and to help repair or regenerate damaged or lost tissues. In the first volume, readers will find a comprehensive resource of current and emerging methods for the production of viral and non-viral gene transfer vectors, as well as detailed protocols for critical applications in stem cell biology, cancer, diabetes, HIV and tissue engineering.

In the second volume readers will find details of current and emerging methods for the processing and characterization of viral and non-viral gene transfer vectors, as well as promising approaches to design vectors for efficient, targeted and regulated gene delivery and expression. This second volume of the new and completely revised third edition of *Gene Therapy Protocols* will prove a necessary tool for graduate students and postdoctoral fellows and invaluable to basic and clinical researchers in both industry and academia.

Checkpoint Responses in Cancer Therapy.

Edited by W. Dai.

2008, pp. 314, US\$165.00, ISBN: 978-1-588-29-930-7.
Humana Press, Totowa, NJ, USA.

Extensive research has uncovered a set of molecular surveillance mechanisms – commonly called "checkpoints" – which tightly monitor cell-cycle processes. Today's anticancer drug development has identified many of these cell-cycle checkpoint molecules as effective targets. Research now promises to uncover a new generation of anticancer drugs with improved therapeutic indices based on their ability to target emerging checkpoint components. This volume summarizes the advances made since the 1980's identifying components of cell-cycle checkpoints and their molecular regulation during checkpoint activation and validating the use of checkpoint proteins as targets for the development of anticancer drugs. This book's distinguished panel of authors takes a close look at topics ranging from the major molecular players affecting DNA synthesis and the response to DNA damage to advances made in the identification of chemical compounds capable of inhibiting individual mitotic kinases. Illuminating and authoritative, *Checkpoint Responses in Cancer Therapy* offers a critical summary of findings for researchers in the pharmaceutical and biotechnology industries and a valuable resource for academic scientists in cancer research and the study of cell-cycle regulation, signal transduction and apoptosis.

Contents: RB pathway: Cell Cycle Control and Cancer Therapy. Targeting the p53/MDM2 Pathway for Cancer Therapy. DNA Topoisomerases as Targets for the Chemotherapeutic Treatment of Cancer. Targeting the DNA Damage Checkpoint (ATM/ATR). Compounds that Abrogate the G2 Checkpoint. CDK Inhibitors as Anti-cancer Agents. CHFR as a Potential Anti-cancer Target. Antimicrotubule Agents. Kinesin Motor Inhibitors as Effective Anti-cancer Drugs. Targeting the Spindle Checkpoint in Cancer Chemotherapy. Anti-proliferation Inhibitors Targeting Aurora Kinases. Plks as Novel Targets for Cancer Drug Design. Do Histone Deacetylase Inhibitors Target Cell Cycle Checkpoints that Monitor Heterochromatin Structure? Index.

Clinical Management of Renal Tumors.

Edited by R.M. Bukowski, A.C. Novick.

2008, pp. 663, US\$149.00, ISBN: 978-1-588-29-251-3.
Humana Press, Totowa, NJ, USA.

This volume provides an in-depth review of the data relating to the management of renal tumors as well as an updated description regarding pathologic and molecular classification of renal tumors. The neoplasms covered include clear cell carcinomas, papillary cancers, nonepithelial tumors, and other mass lesions that resemble tumors. The management of patients with renal cancer having localized or advanced disease are discussed. Surgical approaches for primary and metastatic tumors, symptom palliation, and systemic therapy for metastatic disease including immunotherapy and targeted approaches are discussed in detail.

Contents: Renal Cell Carcinoma: Background. Imaging of Renal Cell Carcinoma. The Role of Percutaneous Imaging Guided Biopsy in the Diagnosis and Management of Renal Masses. Pathology of Renal Cell Carcinomas. The Epidemiology of Renal Tumors. Molecular Genetics in Inherited Renal Cell Carcinoma: Identification of Targets in the Hereditary Syndromes. T Cell Unresponsiveness in RCC Patients. Renal Cell Carcinoma: Clinical Presentation and Diagnosis. Clinical and Pathologic Staging of Renal Cell Carcinoma. Active Surveillance of Localized Renal Tumors. Radical Nephrectomy. Laparoscopic Radical Nephrectomy. Open Nephron-Sparing Surgery for Renal Cell Carcinoma. Minimally Invasive Nephron Sparing Surgery (MINSS) for Renal Tumors: Laparoscopic Partial Nephrectomy and Probe Ablative Treatments. The Role of Angioinfarction in the Management of Renal Tumors. Surveillance Strategies Following Curative Therapy for Localized Renal Cell Carcinoma. Local Recurrence of Renal Cell Carcinoma: Management. Adjuvant Therapy of Renal Cell Carcinoma. Prognostic Factors for Survival in Metastatic Renal Cell Carcinoma. Functional Imaging of Renal Cell Cancer. Nephrectomy in Patients With Metastatic Renal Cell Carcinoma: Clinical and Biologic Effects. Spontaneous Regression of Renal Cell Cancer and the Role of Prognostic Factors. Clinical Management of Renal Cell Carcinoma. Chemotherapy for Metastatic Clear Cell Renal Cell Cancer. Signal Transduction Inhibitors in Renal Cell Carcinoma. Pulmonary Metastases in Patients with Advanced Renal Cell Carcinoma: Role of Metastectomy. Management of Skeletal Metastases in Renal Cell Carcinoma Patients. Renal Cell Carcinoma Metastatic to the Pancreas: Clinical and Therapeutic Aspects. Intracranial Renal Cell Cancer Metastasis. Role of Radiation Therapy in Advanced Renal Cell Carcinoma. Palliation in Renal Cancer. Management of Patients With Pathologic Variants of Renal Cell Carcinoma: Papillary, Collecting Duct, Medullary and Chromophobe Carcinoma, and Sarcomatoid Dedifferentiation. Renal Cell Carcinoma in Patients with End-Stage Renal Disease. Management of Renal Adenomas and Oncocytomas. Renal Angiomyolipoma: Diagnosis and Management. Transitional Cell Carcinoma of the Renal Pelvis: Management. Wilms Tumor in Children and Adults. Rare Malignancies of the Kidney: Evaluation and Management. Index.

Matrix Metalloproteinases in Tissue Remodelling and Inflammation.

Edited by V. Lagente, E. Boichot.

2008, pp. 168, Euro 127.33, ISBN: 9-783764-385842.
Birkäuser Verlag, Basel, Switzerland.

Matrix metalloproteinases (MMPs) are proteolytic enzymes believed to be involved in many physiological and pathological processes associated with inflammatory reactions. MMP synthesis and functions are regulated by three major mechanisms including transcriptional activation, post-transcriptional processing, and control of activity by tissue inhibitors of metalloproteinases (TIMPs). Many cell types have been

identified as producers of MMPs and TIMPs in a context of inflammatory processes. MMPs are involved in numerous inflammatory diseases, including respiratory, cardiovascular and central nervous system pathologies.

This volume presents new advances in the involvement of MMPs in various diseases associated with inflammatory processes. Moreover, the recent development of selective and non selective inhibitors of MMPs provides new insights in the relationship between activation of inflammatory cells and tissue remodelling and advises new therapeutic possibilities for the treatment of inflammatory diseases.

Selected Topics in Cancer Modeling. Genesis, Evolution, Immune Competition and Therapy.

Edited by N. Bellomo, M. Chaplain, E. De Angelis.

2008, pp. 473, Euro 79.90, ISBN: 978-0-8176-4712-4.
Birkäuser Verlag, Basel, Switzerland.

A major challenge in the modeling and simulation of tumor growth is the mathematical description of living matter, which is far more complex than a mathematical description of inert matter. One critical piece of this challenge is creating multiscale models that take into account subcellular, cellular, and macroscopic levels of cancer. The complexity of these different levels requires the development of new mathematical methods and ideas, which are examined in this work.

Written by researchers in the field of mathematical biology, this collection of selected chapters offers a comprehensive overview of state-of-the-art mathematical methods and tools for modeling and analyzing cancer phenomena.

Topics covered include: genetic and epigenetic pathways to colon cancer; a game theoretical perspective on the somatic evolution of cancer; nonlinear modeling and simulation of tumor growth; tumor cords and their response to anticancer agents; modeling diffusely invading brain tumors; multiphase models of tumor growth; mathematical modeling of breast carcinogenesis; predictive models in tumor immunology; multiscale modeling of solid tumor growth.

Selected Topics in Cancer Modeling is an excellent reference for researchers, practitioners, and graduate students in applied mathematics, mathematical biology, and related fields. The book has an overall aim of quantitative, predictive mathematical modeling of solid tumor growth at all scales, from genetics all the way through to treatment therapy for patients.

Atlas of Procedures in Gynecologic Oncology.

Second Edition.

By D.A. Levine, R.R. Barakat, N.R. Abu-Rustum.

2008, pp. 350, ISBN: 9-781841-844985.
Informa Healthcare, London, UK.

The staff at one of the world's leading cancer centers have here collaborated on a practical guide to the procedures involved in gynecologic oncology, covering the latest developments in both open and minimally invasive surgery.

The second edition of this book has been updated to keep abreast with the latest developments in the field, with each chapter purposely presented in great detail giving the reader a complete working knowledge of each procedure. The procedures are explained step by step and fully illustrated, with color photographs used throughout, a third of which are updated or are brand new for this edition. The accompanying DVD provides video clips with spoken commentary.

Part I. Open Procedures: 1. Surgical staging of gynecologic malignancies 2. Radical abdominal hysterectomy 3. Surgery for carcinoma of the vulva 4. Surgical cytoreduction 5. Pelvic exenteration 6. Retroperitoneal lymph node dissection 7. Panniculectomy to facilitate pelvic surgery 8. Fertility-sparing radical abdominal trachelectomy 9. Extended pelvic resection 10. Myocutaneous flap reconstruction.

Part II. Minimally Invasive Procedures: 11. Laparoscopic staging procedures 12. Laparoscopic radical hysterectomy 13. Laparoscopically assisted vaginal radical hysterectomy 14. Vaginal radical trachelectomy 15. Second-look laparoscopy with intraperitoneal catheter placement 16. Extraperitoneal lymph node dissection 17. Video-assisted thoracic surgery and chest tube placement 18. Hand-assisted laparoscopic splenectomy 19. Robotically assisted laparoscopic surgery in gyn malignancies 20. SLN mapping for cervical cancer.

Part III. Related Surgical Procedures: 21. Paracentesis 22. Percutaneous endoscopic gastrostomy tube placement 23. Central venous catheter placement 24. Mediport placement 25. Brachytherapy 26. Cystourethroscopy and ureteral catheterization.

Prognostic and Predictive Factors in Breast Cancer. Second Edition.

Edited by R.A. Walker, A.M. Thompson.
2008, pp. 188, ISBN: 9-780415-422253.
Informa Healthcare, London, UK.

Breast cancer is a heterogenous disease with variation in the natural history and clinical behavior, but the biology of the disease and clinical outcome are closely interlinked. To gain clinically relevant information about outcome, it thus becomes vital to identify with confidence the markers of types of breast cancer behavior that can be regarded as prognostic and predictive factors. The new edition of this volume is essential reading for surgeons, oncologists, pathologists, molecular biologists, and all those involved in breast cancer management.

Diabetes and Cancer. Epidemiological Evidence and Molecular Links.

Edited by K. Masur, F. Thévenod, K.S. Zänker.
2008, pp. 148, Euro 105.50, ISBN: 978-3-8055-8640-5.
S. Karger AG, Basel, Switzerland.

The interdisciplinary work revealing varied roles in biological processes of chronic diseases has led to a new field of research concerning common molecular and clinical features of chronic diseases. Epidemiological literature suggests an association

between the history of metabolic syndrome/diabetes mellitus type 2 and the risk of developing a variety of cancers.

This book, at the forefront of experimental and clinical research, is the first to highlight the common molecular links between these two diseases. These tight links indicate a complex interdependency between both diseases on a cellular and hormonal basis, which is influenced by a variety of aspects (e.g. nutritional, social and neuro-immunological factors). Special attention has been given to the fundamental role of the switch from oxidative phosphorylation to glycolysis of cancer cells – the Warburg effect.

Offering insights into the interdisciplinary approaches of tomorrow, this publication will encourage endocrinologists, oncologists, diabetologists, general practitioners, diabetic nurses and students of life sciences working separately on various aspects of diabetes and cancer to come together and combine therapies and strategies.

Musculoskeletal Radiology.

By H. Griffiths.
2008, pp. 290, ISBN: 9-780849-393907.
Informa Healthcare, New York, NY, USA.

This volume is a single-source guide encompassing all of musculoskeletal imaging by examining classical diseases, as well as modern interpretations of disease. This in-depth coverage of MRI uses a basic "hands on" approach to MRI for exploring the knee, shoulder, wrist, elbow, ankle and foot.

With over 1000 high-definition images, this volume is a complete stand-alone reference for anyone interested in musculoskeletal disease. Other topics include: additional chapters on MRIs; congenital and pediatric disease; trauma; arthritis; metabolic bone disease; infection; tumors; lumbosacral spine; musculoskeletal processes involving the spine; common musculoskeletal diseases and uncommon conditions.

Controversies in the Treatment of Prostate Cancer.

Edited by L. Moser, M. Schostak, K. Miller, W. Hinkelbein.
2008, pp. 130, Euro 90.00, ISBN: 978-3-8055-8524-8.
S. Karger AG, Basel, Switzerland.

Treatment strategies in prostate cancer underlie a permanent change due to continuous improvements. Based on the 10th International Symposium on Special Aspects of Radiotherapy held in Berlin in 2006, this volume highlights key advances in surgical, radiooncological and systemic treatment standards for prostate cancer. Furthermore, interdisciplinary co-operations and controversies are presented and future developments are discussed. The four parts of the book cover the different stages of the disease – localized prostate cancer, the lymph node positive situation, biochemical recurrence, and hormone-refractory and metastatic prostate cancer. Special attention is given to the value and sequence of systemic treatment options in relation to surgery and radiotherapy.

This book will be of great value to urologists and radiation oncologists as well as to all others involved in the care of patients with prostate cancer.

Anticancer Therapeutics.*Edited by S. Missailidis.*

2008, pp. 404, £85.00, ISBN: 978-0-470-72303-6.

John Wiley & Sons, Ltd., Chichester, West Sussex, UK.

This volume provides a comprehensive overview of the wealth of information now available in this important and fast-moving subject. The book provides a clear introduction to the area, with an overview of the various drug design and development approaches for cancer therapeutics and their progress in today's multidisciplinary approach to cancer treatment.

Clearly structured throughout, the book not only provides information on currently used molecular treatment approaches, but also describes the various agents that are currently at various stages of development and clinical trials, thus making them the drugs of tomorrow.

The book goes on to present current therapeutic regimes including their indications and side effects, as well as their position in the international market in terms of sales and development costs. Furthermore, coverage of our advancement in the understanding of cancer biology and how this has driven the drug discovery process is clearly discussed. Modern drug discovery aspects, through genomic, proteomic and metabolomic approaches are referred to as well as combinatorial chemistry techniques and discovery of chemotherapeutic agents from plant extracts, re-use of old drugs and drugs from other indications, or de novo rational drug design.

Featuring contributions from leading experts in the field, this book provides the reader with a complete overview of the various types of therapeutic agents, current and emerging, as well as other aspects associated with anticancer therapy, drug design, resistance and clinical trials in oncology.

Pearls and Pitfalls in Head and Neck Surgery. Practical Tips to Minimize Complications.*Editor: C.R. Cernea; Associate Editors: F.L. Dias, D. Fliss, R.A. Lima, E.N. Myers, W.I. Wei.*

2008, pp. 216, Euro 106.50, ISBN: 978-3-8055-8425-8.

S. Karger AG, Basel, Switzerland.

In this volume leading international experts share their experience in the management of head and neck tumors. The purpose of this publication is to provide a guidebook for all surgeons dealing with head and neck neoplasms.

Each chapter provides a concise description of useful pearls and, especially, dangerous pitfalls which must be avoided. Contributions cover topics from thyroid glands, neck metastases, and oral tumors to laryngeal, pharyngeal, nasopharyngeal tumors and further to salivary gland tumors, skull base tumors and also reconstructive surgery. In addition to frequent diseases which are encountered in everyday practice, some new therapeutic topics such as videoassisted thyroidectomy, robotic surgery and management of the neck after organ preservation treatment are discussed.

Head and neck surgeons, otolaryngologists, neurosurgeons, maxillofacial surgeons, plastic surgeons, radiation and clinical oncologists, general surgeons, as well as students and residents

interested in the management of head and neck tumors will find this publication indispensable.

Angiogenesis in Inflammation: Mechanisms and Clinical Correlates.*Edited by M.P. Seed, D.A. Walsh.*

2008, pp. 180, Euro 119.00, ISBN: 978-0-7643-7626-0.

Birkäuser Verlag, Basel, Switzerland.

Angiogenesis is an essential component of inflammation and its resolution. Traditionally mechanisms in inflammation angiogenesis were inferred from tumour angiogenesis. However, research in recent years has extracted the similarities and dissimilarities between these processes.

This volume shows how the lessons learned from tumour biology applied to inflammation. It develops current knowledge on molecular and cellular mechanisms as they relate to inflammation, including acute and chronic inflammation, neurogenic inflammation. It explains the roles of the multiple cellular components of inflammation, such as fibroblasts, dendritic cells and lymphocytes.

This book shows how this knowledge is being used in the discovery of novel therapeutics. It brings together experts in each of these fields to link the molecular and cellular processes in angiogenesis to those of inflammation and human disease.

Carotenoids. Volume 4: Natural Functions.*Edited by G. Britton, S. Liaaen-Jensen, H. Pfander.*

2008, pp. 370, Euro 89.90, ISBN: 978-0-7643-7498-3.

Birkäuser Verlag, Basel, Switzerland.

The *Carotenoids* book series provides detailed accounts of the fundamental chemistry of carotenoids and the basic methods used in carotenoid research, and critical discussions of the biochemistry, functions and applications of these important compounds.

In the first part of *Volume 4*, the structural features that are most important for determining the properties and hence the biological roles of carotenoids are emphasized. The overall molecular geometry (size, three-dimensional shape, presence of functional groups) is vital to ensure that the carotenoid fits into cellular, sub-cellular and molecular structures in the correct location and orientation to allow it to function efficiently. Specific interactions with other molecules, e.g. to form aggregates or complexes with proteins, strongly influence the properties of a carotenoid *in vivo* and are thus also crucial to functioning. The extended delocalized π -electron system that characterizes the central part of the structure gives the carotenoids their peculiar photochemical properties and reactivity towards oxidizing agents and free radicals.

This treatment provides a foundation for the description of the main functions of carotenoids and their breakdown products in the second part of *Volume 4* and in *Volume 5*. Topics covered in *Volume 4* include various aspects of the roles of carotenoids in colour and colouration, photosynthesis and other photofunctions, and protection. The formation and roles of carotenoid metabolites and breakdown products as perfume/aroma compounds and as

vitamin A are also outlined; the latter is dealt with in more detail in *Volume 5*, which provides a comprehensive discussion of carotenoids in human health and nutrition.

Biologists now are not only discovering new phenomena but are striving to elucidate details of the underlying mechanisms that explain their observations. Chemistry is moving in new directions relevant to studies *in vivo* and new techniques are being developed to investigate structural details and interactions and to detect and interpret changes on an ever shorter timescale. *Volumes 4* and *5* thus point the way to the future of carotenoid research by highlighting the importance of interdisciplinary approaches to study these complex and sophisticated systems.

The Physics of Modern Brachytherapy for Oncology.

By D. Baltas, L. Sakelliou, N. Zamboglou.

2007, pp. 647, ISBN: 978-0750-307086.

Taylor & Francis Group, Boca Raton, FL, USA.

Brachytherapy has become the modality of choice for several cancer localizations, minimizing the possibility of unacceptable risks for healthy tissues and providing a more cost-effective and convenient treatment for patients. Written by leading experts in the physics, development, and implementation of brachytherapy. This volume discusses the subject in detail, covering its definition, the basic physics of radiation interaction with matter, radionuclides, sources and source production, calibration and dosimetry protocols as well as experimental dosimetry methods appropriate for practical use.

The book begins with basic information, including quantities and units, followed by fundamental atomic and nuclear physics. It also provides the historical background of brachytherapy physics. The next several chapters discuss the radionuclides used in brachytherapy, reflecting upon past (radium), present (iridium or cobalt), and future (ytterbium) methods. The book proceeds to examine source calibration and dosimetry protocols for dose rate calculation while the final chapters explore more recent processes, including Monte Carlo-aided, experimental, and gel dosimetry. The appendices provide useful tables of isotopes, unit conversions and physical constants, brachytherapy sources, TG-43 and TG-43 U1 data tables, and dose rate tables.

Detailing the physics behind brachytherapy treatment, this book is essential reading for researchers, practicing radiation oncologists, and medical physicists who want to keep abreast of the developments in this changing field as well as for postgraduate students in medical physics.

Chronic Myeloproliferative Disorders.

Edited by T.I. Mughal, J.M. Goldman.

2008, pp. 236, ISBN: 9-780415-415989.

Informa Healthcare, London, UK.

With the new classification of chronic myeloproliferative disorders, and the rise of interest in molecularly targeted therapies, this timely text brings together international experts on the topic to discuss the current technologies and their implications for the treatment of patients.

This book comprehensively covers chronic myeloid leukemia and Ph-negative chronic myeloproliferative disorders and is an essential resource for all practitioners in Hematologic Oncology.

Diagnosis and Management of Pituitary Disorders.

Edited by B. Swearingen, B.M.K. Biller.

2006, pp. 475, US\$139.00, ISBN: 978-1-588-29-922-2.

Humana Press, Totowa, NJ, USA.

This text provides a detailed update on current diagnostic and therapeutic techniques useful in the management of a broad spectrum of pituitary disorders. The contents reflect the multidisciplinary approach needed for patients with disorders of the pituitary gland, with contributions from both endo-crinologists and neurosurgeons, as well as specialty contributions from radiologists, ophthalmologists, pathologists, radiation oncologists, and neurologists. The book focuses on each pituitary tumor subtype, and contains additional chapters related to other lesions of the sella, including tumor management during pregnancy and in the pediatric age group.

Autophagosome and Phagosome.

Edited by V. Deretic.

2008, pp. 455, US\$99.00, ISBN: 978-1-588-29-853-9.

Humana Press, Totowa, NJ, USA.

Autophagy and phagocytosis are distinct yet partially morphologically similar processes. This volume presents easy-to-follow methods on autophagy, a rapidly growing field with a need for standards of assessment, and phagocytosis, a relatively mature field which could benefit greatly from updated methods, in order to prompt further explorations of their similarities and differences. The methods on autophagy allow the reader to find appropriate techniques to identify, monitor, and quantify autophagic processes, while the methods devoted to phagocytosis provide researchers with several modern techniques for *in vitro* and *in vivo* studies of phagosomal organelles. Following the successful *Methods in Molecular Biology™* series format, chapters include step-by-step laboratory protocols, lists of necessary materials, and tips for troubleshooting and avoiding known pitfalls.

Comprehensive and forward-thinking, *Autophagosome and Phagosome* offers a valuable guide to both cellular processes while inciting researchers to explore the potentially important connections between the two.

Microarrays in Inflammation.

Edited by A. Bosio, B. Gerstmayr.

2008, pp. 232, Euro 119.00, ISBN: 978-3-7643-8333-6.

Birkäuser Verlag, Basel, Switzerland.

The book is of interest to academic and industrial researchers but also clinicians who are working on inflammation related topics and would like to extend their knowledge about microarrays and the application thereof. After reading the book

a researcher or clinician should be in the position to plan, perform and analyse or to critically review microarray experiments related to inflammation research. So far, none of the published books covers all aspects which need to be taken into account when planning and performing a microarray experiment in inflammation research. Normally, for a researcher or clinician doing a microarray experiment it is not enough to have knowledge about microarrays, as the experiment does not start with purified and quality controlled RNA and does not end with signal intensities. Things like appropriate cell sorting techniques, stabilisation and transport of RNA or cells, the knowledge how to deal with whole blood as well as options for automation are crucial for a successful application of microarrays. Moreover these aspects are the main obstacles for transferring microarray based inflammation analysis from bench to bedside and the limiting factors for higher throughput as needed in multicenter studies.

The book is of interest to academic and industrial researchers but also clinicians who are working on inflammation related topics and would like to extend their knowledge about microarrays and the application thereof. After reading the book a researcher or clinician should be in the position to plan, perform and analyze or to critically review microarray experiments related to inflammation research.

Melanoma: Translational Research and Emerging Therapies.

Edited by S.S. Agarwala, V.K. Sondak.

2008, pp. 215, ISBN: 9-780849-390180.

Informa Healthcare, New York, NY, USA.

Assembling, reviewing, and synthesizing state-of-the-art information on translational research and therapies of melanoma into one convenient source, this volume provides clinicians and researchers the necessary context and perspective to integrate and effectively deploy cutting-edge therapies into daily practice.

This source: synthesizes the scientific principles, clinical trial results, and clinical implications of emerging and translational melanoma therapies; covers the entire range of translational research and therapies, including pathogenesis, progression pathways, immunotherapy, gene therapy, adjuvant therapy, surgical staging, and metastatic disease; provides context and perspective to enable the clinician to select and use new therapies effectively and knowledgeably.

Thyroid Ultrasound and Ultrasound-guided FNA. Second Edition.

Edited by H.J. Baskin, D.S. Duick, R.A. Levine.

2008, pp. 249, US\$59.95, ISBN: 078-0-387-77-633-0.

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

This "user friendly" book for the clinician deals with the evaluation and management of thyroid disease. It reviews new information regarding ultrasound and the subtleties one needs to know in the application of this technique.

With abundant ultrasound images, it demonstrates how ultrasound is integrated with the patient history, physical exam, and other thyroid tests (especially FNA biopsy) providing information on improving care.

The book presents numerous, new innovative uses of ultrasound that are being implemented worldwide.

Vaccines for the Prevention of Cervical Cancer.

Edited by P.L. Stern, H.C. Kitchener.

2008, pp. 149, £5.99, ISBN: 978-0-19-954345-8.

Oxford University Press, Oxford, UK.

Cervical cancer is the second most common form of cancer found in women, and it is responsible for more than a quarter of a million deaths worldwide each year. With approximately 70% of cervical cancers now known to be caused by two types of the human papilloma virus (HPV), there is great interest surrounding the approval of the first preventative vaccines for clinical use. Despite this excitement, many questions remain about how the new vaccines should best be implemented and how cervical cancer screening will change following vaccination.

Part of the *Oxford Oncology Library* series, this practical handbook provides an overview of the role of HPV in the pathology of cervical cancer and its current screening and management, the principles of immune control of HPV infection in cervical cancer, and the challenges of implementing HPV vaccines and future developments.

Comparative Hepatitis.

Edited by O. Weber, U. Protzer.

2008, pp. 383, US\$189.00, ISBN: 978-3-7643-8557-6.

Birkhäuser Verlag, Basel, Switzerland.

Acute and chronic hepatitis and hepatitis-related diseases such as liver failure, liver cirrhosis and hepatocellular carcinoma are among the most important causes for disabilities and death. Hepatocellular injury is due to a variety of agents including viruses, toxins, radiation, injury and drugs but also bacteria, parasites and autoimmune reactions.

This volume reviews today's knowledge about hepatitis with emphasis on comparative aspects between hepatitis in humans and animals, but also between different etiological agents. This particular viewpoint makes the book relevant for scientists from both human and veterinary medicine, gastroenterologists, pathologists, virologists and students of human and veterinary medicine.

The Prevention of Second Primary Cancers.

By H. Krueger, D. McLean, D. Williams.

2008, pp. 147, Euro 155.50, ISBN: 978-3-8055-8497-5.

S. Karger AG, Basel, Switzerland.

A second primary cancer (SPC) is a new primary cancer developing in a person with a history of cancer in a new site or tissue and subsequent to the initial cancer. Advances in

cancer treatment have led to marked improvements in cancer cure rates over the past 30 years, and the control of risk factors has further increased longevity. Still, cancer survivors are at increased risk not only for recurrence of the primary cancer but also for the development of second primary malignancies, the latter being especially true for survivors of childhood cancer. SPCs are now more common, and research into them has intensified.

This monograph provides a synthesis of the current research on SPC, culminating in pertinent summary charts, covering the whole spectrum of first and second primary cancers and the association between them. Readers will gain a general understanding of the epidemiology and of the excess risk of SPCs following an implicated first malignancy. The known or suspected etiologic factors for SPCs are identified, and the field is further narrowed to those factors that are modifiable in practice. Effective preventive measures that might reduce the burden of SPC, both for individuals and across at-risk populations, are presented.

Providing practical guidance in terms of possibilities and priorities, this monograph will be a valuable tool for oncologists, general practitioners and health administrators.

Supportive Care in Heart Failure.

Edited by J. Beattie, S. Goodlin.

2008, pp. 491, £59.95, ISBN: 978-0-19-857028-8.

Oxford University Press, Oxford, UK.

Despite recent advances in cardiovascular medicine, heart failure continues to present a challenge to physicians as a generally progressive syndrome with significant symptoms, a poor quality of life and a high mortality. By applying the principles of palliative medicine to this condition, it is possible to offer a supportive care approach that synthesizes the experience of the both heart failure specialist and the palliative care physician, and offers the best possible quality of care to this group of patients. This book provides a practical, evidence-based overview of supportive care in heart failure.

It covers background information on the epidemiology and pathophysiology of heart failure, looking at both pharmacological and device therapy, and exploring the role of the surgeon and the interdisciplinary team. Symptom management is comprehensively addressed, covering early stage symptoms through until the last few days of care, and including both physical and psychosocial support. Prognostication and communication are then explored, including decision making and ethical dilemmas.

This book provides an important resource for cardiologists, cardiac nurses, cardiac surgeons and palliative care specialists as well as the generalist or gerontologist – indeed for all who manage patients with heart failure.

Biomolecular Action of Ionizing Radiation.

By S. Lehnert.

2008, pp. 527, £39.99, ISBN: 0-7503-0824-9.

Taylor & Francis Group, Boca Raton, FL, USA.

Embracing the transformation of radiation sciences by the recent surge of developments in molecular biology, this progressive text offers an up-to-date analysis of *in vitro* and *in vivo* molecular responses in the body induced by ionizing radiation. With a unique emphasis on medical physics applications, this volume also presents a much needed, in-depth perspective on clinical applications for the treatment of cancer and radiation injuries.

Based on a popular course given by the author at McGill University, the book places the traditional tenets of radiation biology in the context of contemporary cell and molecular biology. Using terms that non-experts in molecular biology can understand, it clarifies the underlying mechanisms of radiation effects on molecular interactions including signal transduction pathways, modes of cell killing, and non-targeted effects. The author subsequently associates key principles and advances with potential applications, including the use of ionizing radiation as a cytotoxic and cytostatic agent, and radiosensitization by targeting molecular intermediates or signaling molecules involved in radiation-induced processes.

This volume is an outstanding resource for advanced undergraduate and graduate students in medical physics, radiation oncology, radiation biology, and those who have an interest in the radiation sciences and in cancer treatment.

An Introduction to Radiation Protection in Medicine.

Edited by J.V. Trapp, T. Kron.

2008, pp. 279, £39.99, ISBN: 1-58488-964-0.

Taylor & Francis Group, Boca Raton, FL, USA.

Combining facets of health physics with medicine, this volume covers the background of the subject and the medical situations where radiation is the tool to diagnose or treat human disease. Encouraging newcomers to the field to properly and efficiently function in a versatile and evolving work setting, it familiarizes them with the particular problems faced during the application of ionizing radiation in medicine.

The text builds a fundamental knowledge base before providing practical descriptions of radiation safety in medicine. It covers basic issues related to radiation protection, including the physical science behind radiation protection and the radiobiological basis of radiation protection. The text also presents operational and managerial tools for organizing radiation safety in a medical workplace. Subsequent chapters form the core of the book, focusing on the practice of radiation protection in different medical disciplines. They explore a range of individual uses of ionizing radiation in various branches of medicine, including radiology, nuclear medicine, external beam radiotherapy, and brachytherapy.

With contributions from experienced practicing physicists, this book provides essential information about dealing with radiation safety in the rapidly shifting and diverse environment of medicine.

A Practical Approach to Medical Image Processing.

By E. Berry.

2008, pp. 288, £39.99, ISBN: 1-58488-824-5.

Taylor & Francis Group, Boca Raton, FL, USA.

In this unique text, the author focuses exclusively on image processing and treats medical images in a generic way to highlight the features that all digital images have in common. The book first introduces the main topics in image processing and as it progresses, you will discover relevant points of good practice. The author validates each technique with a corresponding case study, which originates from a published journal article. The case studies demonstrate how the concepts of image processing are applied to real-life situations, such as how to uncover information suffering from distortion and pixel-size limitations. The accompanying CD-ROM contains the Windows version of the ImageJ software, digital images, and documents to be used during the practical activities included in each chapter.

This book allows the reader to build skills in image manipulation and to enjoy the benefits of this valuable field without having to code or develop his or her own program.

Molecular Epidemiology. Applications in Cancer and other Human Diseases.

Edited by T.R. Rebbeck, C.B. Ambrosome, P.G. Shields.

2008, pp. 302, ISBN: 978-142005291-6.

Informa Healthcare, New York, NY, USA.

This volume comprises the investigation of factors that may predict response to treatment, outcome, and survival by exploring:

- Design considerations in molecular epidemiology, including: case-only, family-based, approaches for evaluation of genetic susceptibility to exposure and addiction pharmacogenetics, and incorporation of biomarkers in clinical trials.
- Measurement issues in molecular epidemiology, including: DNA biosampling methods, principles for high-quality genotyping, haplotypes, biomarkers of exposure and effect, and exposure assessment.
- Methods of statistical inference used in molecular epidemiology, including: gene-gene and gene-environment interaction analysis, novel high-dimensional analysis approaches, pathway-based analysis methods, haplotype methods, dealing with race and ethnicity, risk models, and a discussion of reporting and interpreting results.
- A specific discussion and synopsis of these methods provides concrete examples drawn from primary research in cancer.

Covering design considerations, measurement issues and methods of statistical inference, and filled with scientific tables, equations, and pictures, this volume presents a solid, single-source foundation for conducting and interpreting molecular epidemiological studies.

Announcements

4th World Congress on Regenerative Medicine.

12-14 March 2009, Bangkok, Thailand.

Information: www.regmed.org/wcrm2009

7th International Symposium on Targeted Anticancer Therapies.

23-25 March 2009, Amsterdam, The Netherlands.

Information: www.nddo.org (TAT2009)

3rd Conference of The Hellenic Proteomics Society: From Proteomics Research to Clinical Practice.

30 March-1 April 2009, Nafplio, Greece.

Information: www.hellenicproteomicssociety.gr

3rd International Congress of Molecular Medicine.

5-8 May 2009, Istanbul, Turkey.

Information: www.molekuler2009.org

Spatio-temporal Radiation Biology: Transdisciplinary Advances for Biomedical Applications (ESF-EMBO Conference).

16-21 May 2009, Costa Brava, Spain.

Information: www.esf.org/conferences

23rd International Congress on Computer Assisted Radiology and Surgery.

23-27 June 2009, Berlin, Germany.

Information: www.cars-int.org

2nd FEBS Advanced Lecture Course (FEBS-MPST 2009) on Matrix Pathobiology, Signaling and Molecular Targets.

11-16 July 2009, Patras, Greece.

Information: www.febs-mpst2009.upatras.gr