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.

Cancer Nanotechnology. Methods and Protocols.

Edited by S.R. Grobmyer, B.M. Moudgil.
2010, pp. 396, Eur 109.95, ISBN: 978-1-60761-608-5.
Humana Press, New York, NY, USA.

Early detection of cancer at the cellular level, even before anatomic anomalies are visible, is critical to more efficacious and cost effective diagnosis and therapeutic advances. In Cancer Nanotechnology: Methods and Protocols, an international panel of experts provide the most recent, cutting-edge, "how-to" approaches developed and employed by researchers in a variety of disciplines to identify cancer specific biomarkers, construct suitable multifunctional targeted nanostructure platforms, along with enhanced imaging and therapeutic applications. Covering such topics as multifunctional and multimodal nanoparticles, molecular targets for cancer nanotechnology, and nanoparticles for non-invasive image-guided cancer therapy, the volume addresses the key challenges of the field today, specifically targeted and localized delivery of the drugs. As a volume in the highly successful Methods in Molecular Biology™ series, the protocols chapters include brief introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes on troubleshooting and avoiding known pitfalls.

This authoritative volume integrates cancer biology, clinical oncology, molecular cancer imaging, materials science and chemical engineering, biomedical engineering, toxicology, computer science, electrical engineering, chemistry, physics, and mathematics in order to achieve the vital goals of nanotechnology-mediated early cancer detection and more efficacious and less toxic therapies for these devastating diseases.

Natural Killer Cell Protocols. Cellular and Molecular Methods.

Second Edition. Edited by K.S. Campbell.
2010, pp. 550, Eur 89.95, ISBN: 978-1-60761-361-9.
Humana Press, New York, NY, USA.

Natural killer (NK) cells are critical sentinels of the innate immune response, playing important roles in protecting the body from numerous pathogens and cancer in addition to contributing to normal pregnancy and impacting the outcomes of transplantation. While the first edition provided a valuable collection of classical cellular and *in vivo* techniques to study NK cell functions, the Second Edition of Natural Killer Cell Protocols: Cellular and Molecular Methods brings together more recently developed methods, more refined techniques, and detailed protocols designed to study NK cells within specialized tissue sites in both mice and humans. In this collection of methods, international leaders in the field cover topics ranging from the analysis of the various stages of NK cell development and maturation to specialized techniques for the identification of ligands for NK cell receptors. This volume also includes an appendix, providing a rich resource summarizing available reagents to study NK cells, cross-referencing KIR nomenclature, and detailing the many HLA ligands for various KIR family members. As a volume 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 thorough notes sections, highlighting tips on troubleshooting and avoiding known pitfalls.

This comprehensive volume seeks to aid researchers and further advance our understanding of the functions, maturation, and regulation of these fascinating and dynamic cells.

Cyclooxygenases. Methods and Protocols.

Edited by S.S. Ayoub, R.J. Flower, M.P. Seed.
2010, pp. 218, Eur 101.60, ISBN: 978-1-58829-953-6.
Humana Press, New York, NY, USA.

Since the discovery of the pharmacological and toxicological importance of inhibiting the cyclooxygenase (COX) enzymes by non-steroidal anti-inflammatory drugs (NSAIDs), much research has gone into the development of methods to study the biological functions of COX-1 and COX-2. In Cyclo-oxygenases: Methods and Protocols, experts and pioneers in the field present the most up-to-date *in vitro* and *in vivo* techniques routinely used in COX research. The volume delves into essential topics such as the purification, cloning, and expression of COX enzymes as well as *in vitro* assays aimed at determining the inhibitory potency of drugs on COX-1 and COX-2 activities, with chapters describing protocols used for the extraction and measurement of the prostanoids. This volume also describes *in vivo* disease models used to study the roles of COX-1 and COX-2 in gastrointestinal injury, inflammation, and pain. As a book in the highly successful Methods in Molecular Biology™ series, the protocols chapters include brief introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes on troubleshooting and avoiding known pitfalls.

This volume serves as an indispensable tool for all scientists seeking the treatment of inflammation, pain, fever, and other harmful conditions.

Targeted Cancer Therapy.
Edited by R. Kurzrock, M. Markman.
2010, pp. 445, Eur 49.95, ISBN: 978-1-60761-598-9.
Humana Press, New York, NY, USA.

In the era of personalized medicine, cancer treatment has become a model for the use of targeted therapeutics. Leaving behind the "one size fits all" approach to cancer care, this book provides the practicing oncologist with an overview of the advances in treatment and an understanding of the implementation of new therapeutic agents. Targeted Cancer Therapy is divided into twenty chapters covering specific hematologic malignancies and solid tumors, targeted and functional imaging, and combination therapies. Each disease specific chapter includes up-to-date information on investigational and FDA approved therapies which will enhance the reader's ability to prescribe effective drug regimens. This includes combinations of therapies and therapeutic modalities to overcome drug resistance.

In a rapidly changing field, this book will enable clinicians to improve their ability to practice personalized health planning, make early diagnoses, and select optimal drugs for each patient with predictable side effects and outcomes. This volume is essential for practicing and academic physicians, fellows, and residents.

Advances in Chromatographic Techniques for Therapeutic Drug Monitoring.
Edited by A. Dasgupta.
2010, pp. 455, £108.00, ISBN: 978-1-4200-6758-3.
CRC Press, Boca Raton, FL, USA.

For drugs with a narrow therapeutic index, therapeutic drug monitoring methods are essential for patient management. Although immunoassays are commercially available for many drugs and most laboratories use these assays for routine therapeutic monitoring, they have many limitations which hinder their efficacy. Providing practical guidelines for implementing preferred gas and liquid chromatographic methods, Advances in Chromatographic Techniques for Therapeutic Drug Monitoring is a comprehensive reference describing the theory and application of therapeutic drug monitoring in clinical laboratories.

Edited by a distinguished authority in the field and containing contributions from a variety of experts, the book discusses preanalytical variables, the pitfalls of immunoassays, tandem mass spectrometry, issues related to pain management and herbal supplements, and therapeutic drug monitoring for a range of medications, including: Anticonvulsants, Digitalis, Cardioactive drugs, Antidepressants, Immunosuppressants, Anti-cancer drugs, Vancomycin and aminoglycosides, Antibiotics, Antiretroviral drugs, Nonnarcotic analgesics, Anti-inflammatory drugs.

Examing older and newer drugs, the book contains detailed discussions on the rationale for therapeutic drug monitoring of each class of drugs, along with their basic pharmacology and toxicology. An extensive list of references is provided at the end of each chapter so that those interested in implementing a new drug assay can find the most appropriate method for the intended drug.

Textbook of Drug Design and Discovery. Fourth Edition.
Edited by P. Krogsgaard-Larsen, K. Strømgaard, U. Madsen.
2010, pp. 460, £49.99, ISBN: 978-1-4200-6322-6.
CRC Press, Boca Raton, FL, USA.

The molecular biological revolution and the mapping of the human genome continue to provide new challenges and opportunities for drug research and design. Future medicinal chemists and drug designers must have a firm background in a number of related scientific disciplines in order to understand the conversion of new insight into lead structures and subsequently into drug candidates. This volume describes the manner in which medicinal chemists utilize the various fields upon which they draw and the specific strategies they employ to advance promising molecules into clinical use for the treatment of disease.

This text integrates a number of related scientific disciplines, including advanced synthetic chemistry, computational chemistry, biochemistry, structural biology, and molecular pharmacology, to provide current and comprehensive information on all aspects of drug design and discovery.

Extensively revised, new topics in the fourth edition include: Biostructure-based and ligand-based drug design, Chemical biology, Natural products, Imaging, Neurotransmitter transporters, Opioid and cannabinoid receptors, Hypnotics, Neglected diseases, Immunomodulating agents, Antibiotics.

The first part of the book covers general aspects, methods, and principles for drug design and discovery, and the second part covers specific targets and diseases. The text contains more than 300 color figures and 24 tables for rapid assimilation. Most chapters also provide the background and history needed to provide a context for students, as well as conclusions that summarize the points most relevant to emerging areas of research in drug design.

Industrial Biotechnology. Sustainable Growth and Economic Success.
Edited by W. Soetaert, E.J. Vandamme.
2010, pp. 499, £140.00, ISBN: 978-3-527-31442-3.
Wiley-VCH, Weinheim, Germany.

This comprehensive textbook covers the enabling sciences and technologies, the application domains, as well as the economic and societal impact of industrial biotechnology, also referred to as "white biotechnology". Industrial Biotechnology is an environmentally friendly and sustainable technology that uses micro-organisms and their enzymes to make new and innovative bioproducts, useful in chemistry, energy supply, food and feed, paper and pulp, textiles, personal care, etc.

The book is divided into 14 parts: 1. History of industrial biotechnology; 2. Industrial systems biology; 3. Fermentation technology; 4. Directed evolution of industrial biocatalysts; 5. The industrial production of enzymes; 6. Applied biocatalysis: An Overview; 7. Nanobiotechnology; 8. Downstream processing in industrial biotechnology; 9. Industrial biotechnology in the chemical and pharmaceutical industries; 10. Industrial biotechnology in the food and feed sector; 11. Industrial biotechnology in the paper and pulp sector; 12. Biofuels: Production and applications; 13. Enviromental and economic aspects of industrial biotechnology; 14. Societal issues in industrial biotechnology.

This book is equally very suitable as an introductory handbook to students, scientists and academics as well as researchers and engineers in a wide range of industries, including the chemical, pharmaceutical and, agro-industry.

Electrospray and MALDI Mass Spectrometry. Fundamentals, Instrumentation, Practicalities, and Biological Applications.

Edited by R.B. Cole.
2010, pp. 847, £100.00, ISBN: 978-0-471-74107-7.
Wiley, Hoboken, NJ, USA.

This volume brings both veteran practitioners and beginning scientists up to date with the most recent trends and findings in electrospray ionization and matrix-assisted laser desorption/ionization (MALDI) mass spectrometry. In particular, this Second Edition highlights how advances in electrospray and MALDI mass spectrometry are supporting important discoveries in new and emerging fields such as proteomics and metabolomics as well as in traditional areas of chemistry and physics research.

This book is divided into five parts: Part A, Fundamentals of ES, explains the fundamental phenomena underlying the electrospray process, including selectivity in ionization and inherent electrochemistry, and concludes with a chapter offering a comparative inventory of source hardware; Part B, Fundamentals of MALDI, confronts ionization mechanisms, instrument development, and matrix selection, and includes a final chapter that explores the special application of MALDI to obtain two-dimensional images of spatial distributions of compounds on surfaces; Part C, ES and MALDI Coupling to Mass Spectrometry Instrumentation, examines the coupling of these ionization techniques to various mass analyzers, including quadrupole ion trap, time-of-flight, Fourier transform ion cyclotron resonance, and ion mobility mass spectrometers; Part D, Practical Aspects of ES and MALDI, investigates analytical issues including quantification, charge-state distributions, noncovalent interactions in solution that are preserved as gas-phase ions, and various means of ion excitation in preparation for tandem mass spectrometry, and offers a guide to the interpretation of even-electron mass spectra; Part E, Biological Applications of ES and MALDI, examines the role of mass spectrometry in such areas as peptide and protein characterization, carbohydrate analysis, lipid analysis, and drug discovery.

Written by a team of leading experts, the book not only provides a critical review of the literature, but also presents key concepts in tutorial fashion to help readers take full advantage of the latest technological breakthroughs and applications. As a result, this volume will help researchers fully leverage the power of electrospray and MALDI mass spectrometry. The judicious compartmentalization of chapters, and the pedagogic presentation style throughout, render the book highly suitable for use as a text for graduate-level courses in advanced mass spectrometry.

Signal Processing in Magnetic Resonance Spectroscopy with Biomedical Applications.

By D. Belkić, K. Belkić.
2010, pp. 447, £76.99, ISBN: 978-1-4398-0644-9.
CRC Press, Boca Raton, FL, USA.

Addressing the critical need in clinical oncology for robust and stable signal processing in magnetic resonance spectroscopy (MRS), this book explores cutting-edge theory-based innovations for obtaining reliable quantitative information from MR signals for cancer diagnostics. By defining the natural framework of signal processing using the well-established theory of quantum physics, the book illustrates how advances in signal processing can optimize MRS.

The authors employ the fast Padé transform (FPT) as the unique polynomial quotient for the spectral analysis of MR time signals. They prove that residual spectra are necessary but not sufficient criteria to estimate the error invoked in quantification. Instead, they provide a more comprehensive strategy that monitors constancy of spectral parameters as one of the most reliable signatures of stability and robustness of quantification. The authors also use Froissart doublets to unequivocally distinguish between genuine and spurious resonances in both noise-free and noise-corrupted time signals, enabling the exact reconstruction of all the genuine spectral parameters. They show how the FPT resolves and quantifies tightly overlapped resonances that are abundantly seen in MR spectra generated using data from encoded time signals from the brain, breast, ovary, and prostate.

Written by a mathematical physicist and a clinical scientist, this book captures the multidisciplinary nature of biomedicine. It examines the remarkable ability of the FPT to unambiguously quantify isolated, tightly overlapped, and nearly confluent resonances.

Handbook of Photonics for Biomedical Science.

Edited by V.V. Tuchin.
2010, pp. 815, £95.00, ISBN: 978-1-4398-0628-9.
CRC Press, Boca Raton, FL, USA.

The Handbook of Photonics for Biomedical Science analyzes achievements, new trends, and perspectives of photonics in its application to biomedicine. With contributions from experts in the field, the handbook describes advanced biophotonics

methods and techniques intensively developed in recent years. Addressing the latest problems in biomedical optics and biophotonics, the book discusses optical and terahertz spectroscopy and imaging methods for biomedical diagnostics based on the interaction of coherent, polarized, and acoustically modulated radiation with tissues and cells. It covers modalities of nonlinear spectroscopic microscopies, photonic technologies for therapy and surgery, and nanoparticle photonic technologies for cancer treatment and UV radiation protection. The text also elucidates the advanced spectroscopy and imaging of normal and pathological tissues.

Features: Describes important methods, such as finite-difference time-domain simulation, for the mathematical modeling of light transport and interaction with cells; Discusses recent optical and terahertz spectroscopy and imaging methods for biomedical diagnostics; Presents novel modalities of photon ballistic, multidimensional fluorescence, Raman, confocal, CARS, and other nonlinear spectroscopies that provide molecular-level cell and tissue imaging; Explores key photonic technologies for therapy and surgery, including photodynamic, low-intensity laser, and photothermal therapies; Explains how nanoparticle photonic technologies are used for cancer treatment and human organism protection from UV radiation; Focuses on advanced spectroscopy and imaging of a variety of normal and pathological tissues, such as embryonic, eye, skin, brain, and gastric tissues.

By collecting recently published information scattered in the literature, the book enables researchers, engineers, and medical doctors to become familiar with major, state-of-the-art results in biophotonics science and technology.

Handbook of Anatomical Models for Radiation Dosimetry.

Edited by X.G. Xu, K.F. Eckerman.
2010, pp. 721, £78.99, ISBN: 978-1-4200-5979-3.
CRC Press, Boca Raton, FL, USA.

In the past 40 years, the radiological science community has developed and applied numerous models of the human body for radiation protection, diagnostic imaging, and nuclear medicine therapy. The Handbook of Anatomical Models for Radiation Dosimetry provides a comprehensive review of the development and application of these computational models, known as "phantoms."

Assembling the work of nearly all major phantom developers around the world, this volume examines: The history of the research and development of computational phantoms; Detailed accounts for each of the well-known phantoms, including the MIRD-5, GSF Voxel Family Phantoms, NCAT, UF Hybrid Pediatric Phantoms, VIP-Man, and the latest ICRP Reference Phantoms; Physical phantoms for experimental radiation dosimetry; The smallest voxel size (0.2 mm), phantoms developed from the Chinese Visible Human Project; Applications for radiation protection dosimetry involving environmental, nuclear power plant, and internal contamination exposures; Medical applications, including nuclear medicine therapy, CT examinations, x-ray radiological image optimization, nuclear medicine imaging, external photon and proton treatments, and management of respiration in modern image-guided radiation treatment; Patient-specific phantoms used for radiation treatment planning; Future needs for research and development

Related data sets are available for download on the editors' website. The breadth and depth of this work enables readers to obtain a unique sense of the complete scientific process in computational phantom development, from the conception of an idea, to the identification of original anatomical data, to solutions of various computing problems, and finally, to the ownership and sharing of results in this groundbreaking field that holds so much promise.

Protein Discovery Technologies.

By R. Pasqualini, W. Arap.
2010, pp. 246, £95.00, ISBN: 978-1-8247-5468-6.
CRC Press, Boca Raton, FL, USA.

Featuring contributions from a distinguished international panel of experts, Protein Discovery Technologies elucidates the principles, techniques, strategies, and broad range of applications of protein discovery by documenting the often untold stories and personal accounts of the contributors' past scientific achievements.

Rather than an exhaustive field analysis, this globally pertinent resource presents in-depth discussions of various methods for protein discovery, including bioinformatics, interaction cloning, protein purification, phage display, non-primate models, and chemical targeting. It also explores biological themes through the examination of cell death, angiogenesis, hemostasis, development, signal transduction, transcriptional control, cell cycle control, neurobiology, and quality control. This readily accessible resource discusses an array of interesting topics, including: Tumor necrosis factors; The origin of interferon as an angiogenesis inhibitor; In vivo combinatorial mapping of vascular zip codes; Extracellular matrix degradome as regulators of angiogenesis and tumor growth; A matricellular protein prototype; The use of RING finger proteins as E3 Ubiquitin Ligases.

Whereas most books tend to be more specialized, this book contains a broad view of the protein discoveries in many different fields, making Protein Discovery Technologies a valuable reference for today's researchers, both the new and more seasoned, who are seeking a newfound perspective or a deeper understanding of this exciting field.

Instrumental Analysis of Intrinsically Disordered Proteins. Assessing Structure and Conformation.

Edited by V.N. Uversky, S. Longhi.
2010, pp. 744, £100.50, ISBN: 978-0-47034-341-8.
Wiley, Hoboken, NJ, USA.

The recently recognized phenomenon of protein intrinsic disorder is gaining significant interest among researchers, especially as the number of proteins and protein domains that

have been shown to be intrinsically disordered rapidly grows. The first reference to tackle this little-documented area, *Instrumental Analysis of Intrinsically Disordered Proteins: Assessing Structure and Conformation* provides researchers with a much-needed, comprehensive summary of recent achievements in the methods for structural characterization of intrinsically disordered proteins (IDPs).

Chapters discuss: Assessment of IDPs in the living cell; Spectroscopic techniques for the analysis of IDPs, including NMR and EPR spectroscopies, FTIR, circular dichroism, fluorescence spectroscopy, vibrational methods, and single-molecule analysis; Single-molecule techniques applied to the study of IDPs; Assessment of IDP size and shape; Tools for the analysis of IDP conformational stability; Mass spectrometry; Approaches for expression and purification of IDPs.

With contributions from an international selection of leading researchers, this book fills an important need in a rapidly growing field. It is required reading for biochemists, biophysicists, molecular biologists, geneticists, cell biologists, physiologists, and specialists in drug design and development, proteomics, and molecular medicine with an interest in proteins and peptides.

Flow Cytometry in Neoplastic Hematology. Morphologic – Immunophenotypic Correlation.

Second Edition. By W. Gorczyca.
2010, pp. 342, Eur 188.00, ISBN: 978-184-184702-3.
Informa Healthcare, London, UK.

Flow cytometry is a fast means of reaching a diagnosis in many cases in haematopathology and is becoming ever more popular as the front line in clinical practice, interesting even those with no basic training in its techniques. However, it is not always the only component necessary for an answer, so correlation with histomorpholgoy is always welcome and often vital. This highly illustrated and highly practical guide is not only a comprehensive primer on the aspects relevant for clinical diagnosis and explains the general parameters useful in diagnosis with flow cytometry, but also correlates histomorphologic and chromosomal/molecular features and explains cases of discrepancy between findings with the two modalities.

Image-Guided Radiation Therapy in Lymphoma Management. The Increasing Role of Functional Imaging.

Edited by R.M. Macklis, P.S. Conti.
2010, pp. 84, £188.00, ISBN: 978-142005874-1.
Informa Healthcare, London, UK.

The development and wide spread application of functional imaging, for example 18FDG-PET and PET-CT, have revolutionized the planning process for radiation medicine. Image-Guided Radiation Therapy therefore allows clinicians to ensure accurate radiation dose delivery with greatest prospect of tumor control while also minimizing toxicity to normal healthy tissue. This book provides a solid understanding of this emerging technology to help clinicians employ IGRT to lymphoma management and to help improve patient outcome.

Lung Cancer. Prevention, Management, and Emerging Therapies.

Edited by D.J. Stewart.
2010, pp. 538, Eur 179.95, ISBN: 978-1-60761-523-1.
Humana Press, New York, NY, USA.

This comprehensive resource provides authoritative knowledge of the most up-to-date prevention and treatment strategies for thoracic malignancies. Established and investigational therapies are placed in the context of tumor biology for a full understanding of the pharmacogenetics, etiology, and changing epidemiology of lung cancer. Expert clinicians detail the function of predictive and prognostic factors in the utilization of chemo-radiotherapy, adjuvant and neoadjuvant treatment, and targeted agents. The promises and potential pitfalls of investigational strategies are evaluated with exceptional insight and clarity, with unique attention paid to the mechanisms of drug resistance and targets for lung cancer treatment and prevention.

This volume engages the entire spectrum of therapeutic modalities with focus on systemic approaches. Disease coverage includes newly diagnosed and recurrent non-small cell lung cancer, small cell carcinoma, and mesothelioma. Critical examination of the impact, methodology, and design of clinical trials is presented along with new paradigms for personalized approaches and individual risk assessment.

Protein Misfolding in Neurodegenerative Diseases. Mechanisms and Therapeutic Strategies.

Edited by H.J. Smith, C. Simons, R.D.E. Sewell.
2008, pp. 565, $173.95, ISBN: 978-0-8493-7310-7.
CRC Press, Boca Raton, FL, USA.

Research focused on protein folding, misfolding, and aggregation is leading to major advances across biochemistry and medicine. The elucidation of a folding code is proving to be of extreme importance in the postgenomic era, where a number of orphan genes have been identified for which no clear function has yet been established. This research is starting to shed light on the molecular and biochemical basis of a number of neurodegenerative diseases of dramatic impact.

This volume addresses key issues concerning protein misfolding and aggregation in neurodegenerative diseases. Building on recent developments, including the recognition of protein misfolding as both a marker and a causal agent, the text presents the work of those who are actively pursuing more effective treatments, as well as preventative measures, and a possible cure.

Integrating new theories of protein misfolding and its effect on prominent neurodegenerative diseases this volume: Examines the latest research on Alzheimer's, Parkinson's, Huntington's, Amyotrophic Lateral Sclerosis and Transmissible Spongiform

Encephalitis; Explores the likelihood that oxidative stress and other factors influence these complex diseases; Looks at emerging treatments to control misfolding, including the use of molecular chaperones, inhibitors, and NSAIDS; Analyzes the design of novel pharmaceuticals in relation to diverse biochemical targets.

With contributions from pioneering explorers in protein misfolding, this work provides researchers and others with a comprehensive multifaceted examination of the complex casual and biological roots of neurodegenerative diseases. The theories it develops and supports hold great promise for the future treatment of diseases formerly considered intractable.

Breast Cancer Epidemiology.

Edited by C.I. Li.
2010, pp. 417, Eur 139.95, ISBN: 978-1-4419-0684-7.
Springer Science and Business Media, New York, NY, USA.

As the most common cancer diagnosed among women world-wide, breast cancer is a disease of considerable public health importance. The number of established and hypothesized risk factors for breast cancer exceeds that of any other cancer resulting in a rich, but complicated and often conflicting literature on the epidemiology of this disease. Our understanding of factors that contribute to breast cancer risk, as well as the biology and molecular basis for this common disease, has greatly increased over the past few decades. This book provides a comprehensive review and critical assessment of the epidemiology literature on all major aspects of breast cancer incidence and mortality, etiology, and outcomes. Chapters are written by internationally recognized leaders in the field and provide a timely review of traditional etiologic risk factors, as well as more recently evaluated exposures. Several chapters are also devoted to clinical aspects of breast cancer including screening, diagnosis and treatment, and survival. As a result, this is the most up-to-date and comprehensive book on breast cancer epidemiology available.

Managing Infections in Patients with Hematological Malignancies.

Edited by M. Kleinberg.
2010, pp. 371, Eur 149.75, ISBN: 978-1-58829-986-4.
Humana Press, New York, NY, USA.

Managing infections that complicate care of neutropenic patients with leukemia and hematopoietic stem cell recipients has become a distinct specialty. In Managing Infections in Patients with Hematological Malignancies, the authors and editor provide a roadmap for hematologists to efficiently manage the complex infections within their patients. The first section of the text reviews viral, bacterial, and fungal pathogens, and provides brief descriptions of the microbes and diseases they cause in patients with hematological malignancies. The second section is devoted to management of infections in patients with the different underlying hematological malignancies, while the third addresses several important topics that are often ignored in most books about infections and hematological malignancies. This volume is a useful tool for all clinicians and practicing hematologists who treat individual patients and aspire to build stronger infectious diseases programs within their respective cancer centers.

Cancer and IgE. Introducing the Concept of AllergoOncology.

Edited by M.L. Penichet, E. Jensen-Jarolim.
2010, pp. 287, Eur 129.95, ISBN: 978-1-60761-450-0.
Springer Science and Business Media, New York, NY, USA.

Allergies are caused by a person's own IgE antibodies directed against innocuous antigens like pollen or house dust mites. Interestingly, several studies have examined the relation between allergies or level of IgE and malignancies and have found an inverse association suggesting a natural role of IgE in cancer immunosurveillance. Is it thus possible that IgE immunoglobulins could have a beneficial function against cancer besides their harmful function in allergy? If so, can we exploit this beneficial function for the development of new cancer therapies? Could oncologists learn from allergists and vice versa? This book attempts to explore step by step these interesting questions, opening a novel science field: AllergoOncology.

AllergoOncology by definition aims to reveal the function of IgE-mediated immune responses against cancer cells in order to enhance the understanding of its biology and to develop novel IgE-based treatment options against malignant diseases. This book opens new avenues towards IgE antibodies as key effector molecules able to confer protection against cancer development and progression. This affinity-matured class of antibody, belonging to Th2-mediated immunity, uses an exquisite panel of potent effector cells which can eradicate malignant cells. Importantly, IgE is also capable of binding to professional antigen presenting cells thereby enhancing the presentation of cancer antigens and leading to a significant anti-tumor immune response. Based on its anti-tumor efficacy, which has been shown *in vitro* and in preclinical models, IgE can be potentially used in human in the context passive and active cancer immunotherapy. In summary, this book, which is the first of its class, is a comprehensive volume about the evolving new field AllergoOncology.

Myeloma Bone Disease.

Edited by G.D. Roodman.
2010, pp. 252, Eur 159.95, ISBN: 978-1-60761-533-8.
Springer Science and Business Media, New York, NY, USA.

This state-of-the-art book presents the forefront in the science and clinical management of myeloma bone disease. Assembling the work of the world's premier thought leaders, this book begins with sections on clinical presentation, imaging, and biochemical markers and then goes on to discuss radiation, surgical, and medical therapies. Specific chapters are devoted

to bisphosphonates and novel therapeutic agents, such as RANKL inhibitors, Wnt signaling inhibitors, and IMiDs. The mechanisms of osteoclast activation and osteoblast suppression in multiple myeloma are also explored.

This volume is a valuable resource for medical, surgical, and radiation oncologists and cancer researchers.

The Biochemsitry of Drug Metabolism: Principles, Redox Reactions, Hydrolyses.

By B. Testa, S.D. Krämer.
2008, pp. 319, Eur 57.00, ISBN: 10 3-096390-53-5.
Wiley-VCH, Weinheim, Germany.
and

The Biochemsitry of Drug Metabolism: Conjugations, Consequences of Metabolism, Influencing Factors.

By B. Testa, S.D. Krämer.
2010, pp. 588, Eur 54.00, ISBN: 10 3-096390-54-5.
Wiley-VCH, Weinheim, Germany.

These two volumes provide a comprehensive scientific basis for the study of the biochemistry of drug metabolism. The text is practically organized with extensive literature and information figures. As well as providing fundamental knowledge towards understanding the principles of drug metabolism, to those new to the subject, both volumes represent an invaluable reference for researchers in the field of biochemistry, pharmacology and new drug development.

Personalized Nutrition. Translating Nutrigenetic / Nutrigenomic Research into Dietary Guidelines.

Edited by A.P. Simopoulos, J.A. Milner.
2010, pp. 180, Eur 163.00, ISBN: 978-3-8055-9427-1.
S. Karger AG, Basel, Switzerland.

Awareness of the influence of our genetic variation to dietary response (nutrigenetics) and how nutrients may affect gene expression (nutrigenomics) is prompting a revolution in the field of nutrition. Nutrigenetics/Nutrigenomics provide powerful approaches to unravel the complex relationships among nutritional molecules, genetic variants and the biological system.

This publication contains selected papers from the '3rd Congress of the International Society of Nutrigenetics/ Nutrigenomics' held in Bethesda, Md., in October 2009. The contributions address frontiers in nutrigenetics, nutrigenomics, epigenetics, transcriptomics as well as non-coding RNAs and posttranslational gene regulations in various diseases and conditions. In addition to scientific studies, the challenges and opportunities facing governments, academia and the industry are included.

Everyone interested in the future of personalized medicine and nutrition or agriculture, as well as researchers in academia, government and industry will find this publication of the utmost interest for their work.

Human Molecular Genetics. 4th Edition.

By T. Strachan, A. Read.
2010, pp. 781, £49.00, ISBN: 978-0-8153-4149-9.
Taylor & Francis Group, New York, NY, USA.

Human Molecular Genetics is an established and class-proven textbook for upper-level undergraduates and graduate students which provides an authoritative and integrated approach to the molecular aspects of human genetics.

The Fourth Edition has been completely updated so genomic technologies are integrated throughout, and next generation sequencing is included. Genetic testing, screening, approaches to therapy, personalized medicine, and disease models have been brought together in one section. Coverage of cell biology including stem cells and cell therapy, studying gene function and structure, comparative genomics, model organisms, noncoding RNAs and their functions, and epigenetics have all been expanded.

The pedagogical features include new Key Concepts at the beginning of each chapter and annotated further reading at the conclusion of each chapter, to help readers navigate the wealth of information in this subject.

The Mandsley Prescribing Guidelines. 10th Edition.

By D. Taylor, C. Paton, S. Kapur.
2009, pp. 523, £ 50.00, ISBN: 978-184-184699-6.
Informa Healthcare, London, UK.

The 10th edition of the Maudsley Prescribing Guidelines fully updates the 9th edition and includes new sections offering guidance on, for example, the use of psychotropics in atrial fibrillation, alternative routes for antidepressant administration, the treatment of velo-cardio-facial syndrome and the covert administration of medicines. Where possible guidance has been aligned with the most recently issued guidelines from UK NICE and the latest Cochrane reviews. There has also been an attempt to make the text 'future-proof ' (at least for a year or two) by anticipating new drug introductions and changes in Product Licences.

Contents: 1. Plasma level monitoring of psychotopics and anticonvulsants; 2. Schizophrenia; 3. Bipolar disorder; 4. Depression and anxiety; 5. Children and adolescents; 6. Substance misuse; 7. Use of psychotropics in special patient groups; 8. Miscellaneous conditions and substances.

Handbook of Physics in Medicine and Biology.

Edited by R. Splinter.
2010, £95.00, ISBN: 978-1-4200-7524-3.
CRC Press, Boca Raton, FL, USA.

This textbook explores the full gamut of physics' relationship to biology and medicine in more than 40 chapters, written by experts from the lab to the clinic. The book begins with a basic description of specific biological features and delves into the physics of explicit anatomical structures starting with the cell. Later chapters look at the body's senses, organs, and systems, continuing to explain biological functions in the language of

physics. The text then details various analytical modalities such as imaging and diagnostic methods. A final section turns to future perspectives related to tissue engineering, including the biophysics of prostheses and regenerative medicine.

This book covers the engineering and physics that can help explain clinical conditions, describes the technology used to examine them, and then integrates this information to look at emerging technologies that align the pursuit of health with the laws of physics, leading to improved diagnostic and therapeutic applications.

Introduction to Proteomics. Principles and Applications.

By N.C. Mishra.
2010, pp. 180, £66.95, ISBN: 978-0-471-75402-2.
Wiley, Hoboken, NJ, USA.

This book provides a highly authoritative introduction to the promising and fast-advancing field of proteomics, examining the role proteomics plays in the study of biological systems in general and disease in particular. It helps readers understand the structure, function, and interactions of proteins and how this knowledge is used for identifying diseases and developing new drugs.

The Author offers an expert perspective on the entire field, including: Easily accessible overview of the principles of proteomics; Coverage of real-world, cutting-edge medical applications, including personalized medicine; Clear guidelines on how to operate the complex instrumentation involved in proteomics; Discussion of the future of proteomics.

IARC Monographs on the Evaluation of Carcinogenic. Risks to Humans.

Volume 92: Some Non-heterocyclic Aromatic Hydrocarbons and some Related Exposures.
2010, pp. 853, ISBN: 978-92-832-1292-8.
IARC, Lyon, France.

This volume provides comprehensively data on the carcinogenic risk, hazards, toxicology, exposure data, studies of cancer in humans, studies of cancer in experimental animals, evaluation of carcinogenicity, chemical and physical data for some non-heterocyclic polycyclic aromatic hydrocarbons.

Complete information and extensive literature is provided on each chapter.

Biopharmaceuticals in Plants. Toward the Next Century Medicine.

By K.L. Hefferon.
2010, pp. 206, £63.99, ISBN: 978-1-4398-0474-2.
CRC Press, Boca Raton, FL, USA.

Transgenic plants present enormous potential to become one of the most cost-effective and safe systems for large-scale production of proteins for industrial, pharmaceutical, veterinary, and agricultural uses. Over the past decade, much progress has been made with respect to the development of vaccines, antibodies, and other therapeutic proteins. *Biopharmaceuticals in Plants: Toward the Next Century of Medicine* provides a comprehensive survey of all major aspects of the development and production of plant-made biopharmaceuticals.

Accompanied by an exhaustive list of references to facilitate further study, this critical volume: Describes the theory and practice of modern plant transformation techniques with respect to nuclear and plastic genomes; Outlines the steps involved in the generation of transgenic plants; Discusses the engineering of plant virus expression vectors for transient expression of vaccine proteins and other therapeutics in plant tissue; Addresses the significant role of glycosylation in the production of plant-made mammalian proteins; Investigates the basis of mucosal immunity using plant-based oral vaccines; Examines the scale-up of plant-derived vaccine and therapeutic proteins in entire crops or in large batch cell suspension cultures; Explores the development of clinical trials utilizing plant-derived biopharmaceutical proteins; Evaluates risks and biosafety concerns regarding plant-derived pharmaceuticals.

The book concludes with a discussion of the future of plant-based vaccines and other therapeutic proteins with respect to commercial viability and as a tool to improve global public health. Far-reaching in its scope, this text is a baseline reference that students and researchers in a broad range of fields such as medicine, plant science, biotechnology, crop science, natural products chemistry, and engineering will consult regularly. It will also serve as a useful tool for individuals and companies seeking to invest in this dynamic area.

Cancer in Numbers.

By Isthak Zusman.
2010, pp. 342, $137.00, ISBN: 978-81-7895-459-2.
Transworld Research Network, Kerala, India.

A range of services is available to help patients and their families manage the psychosocial aspects of cancer. However, all of the services could be better performed if they were based on more knowledge about the spread of cancer, the pathogenesis of its different forms (types), and the conditions for faster and more successful patient recovery and survival.

In this respect, the new book "Cancer in Numbers" by Dr. Itzhak Zusman, retired professor of the Koret School of Veterinary Medicine, Hebrew University of Jerusalem, Israel, can be highly useful because it presents an analysis of possible reasons (genetic and environmental) for cancer appearance, development and wide spreading.

Contents: 1. Screening for cancer risk; 2. Effects of disease stage and tumor location on cancer mortality; 3. Geographic/environmental differences in cancer incidence, survival and mortality; 4. Socioeconomic inequalities and cancer incidence, survival and mortality; 5. Age-related cancer incidence, survival and mortality; 6. Racial/ethnic differences in cancer incidence and mortality; 7. Gender-related differences in cancer incidence and mortality; 8. Diet and cancer in humans.

This book will be of interest to medical oncologists, radiation therapists and surgeons involved in the diagnosis and management of cancer.

Cancer Genome and Tumor Microenviroment.
Edited by A. Thomas-Tikhonenko.
2010, pp. 497, Eur 139.95, ISBN: 978-1-4419-0710-3.
Springer Science and Business Media, New York, NY, USA.

Oncogenes and tumor suppressor genes had been traditionally studied in the context of cell proliferation, differentiation, senescence, and survival, four relatively cell-autonomous processes. Consequently, in the late '80s-mid '90s, neoplastic growth was described largely as a net imbalance between cell accumulation and loss, brought about through mutations in cancer genes. In the last ten years, a more holistic understanding of cancer slowly emerged, stressing the importance of interactions between neoplastic and various stromal components: extracellular matrix, basement membranes, fibroblasts, endothelial cells of blood and lymphatic vessels, tumor-infiltrating lymphocytes, etc . Nevertheless, the commonly held view is that changes in tumor microenvironment are "soft-wired", i.e. epigenetic in nature and often reversible. Yet, there exists a large body of evidence suggesting that well-known mutations in cancer genes profoundly affect tumor milieu. In fact, these cell-extrinsic changes might be one of the primary reasons such mutations are preserved in late-stage tumors. Cancer Genome and Tumor Microenvironment reviews how tumor microenvironment and progression can be "hard-wired", i.e. genetically controlled.

Quantitative Drug Design. A Critical Introduction.
Second Editon. By Y.C. Martin.
2010, pp. 282, £82.00, ISBN: 978-1-4200-7099-6.
CRC Press, Boca Raton, FL, USA.

Incorporating the novel developments that have occurred in this field since the publication of the first edition, *Quantitative Drug Design: A Critical Introduction, Second Edition* shows scientists how to apply quantitative structure-activity relationship (QSAR) techniques at a state-of-the-art level. It presents computational methods that analyze the relationships between molecular structure and biological activity, emphasizing techniques that provide a quantitative forecast of biological potency.

Based on the author's four decades of experience in all areas of ligand-based computer-assisted drug design, this invaluable book describes how to transform ligand structure-activity relationships into models that predict the potency or activity/inactivity of new molecules. It discusses the physical chemistry of ligand-macromolecule interactions and the computer programs that translate a molecule's potential to participate in these interactions into interpretable quantitative descriptors. The book also covers the fundamentals of multivariate statistics and validation procedures needed to support a valid structure-activity model.

Contents: 1.Overview of Quantitative Drug Design; 2. Noncovalent Interactions in Biological Systems; 3. Preparation of 3D Structures of Molecules for 3D QSAR; 4. Calculating Physical Properties of Molecules; 5. Biological Data; 6. Form of Equations that Relate Potency and Physical Properties; 7. Statistical Basis of Regression and Partial Least-Squares Analysis; 8. Strategy for the Statistical Evaluation of a Data Set of Related Molecules; 9. Detailed Examples of QSAR Calculations on Erythromycin Esters; 10. Case Studies; 11. Methods to Approach Other Structure-Activity Problems.

Understanding Leukemias, Lymphomas and Myelomas. Second Edition.
By T.I. Mughal, J.M. Goldman, S.T. Mughal.
2010, pp. 161, Eur 125.00, ISBN: 9781841846941.
Informa UK Ltd, Colchester, Essex, UK.

This volume presents an updated and comprehensive guide to hematologic malignancies covering all clinically relevant aspects from molecular biology and pathology to treatments and clinical management. It is suitable for a varied readership, including patients, the general public, health care professionals, medical, nursing and pharmacy students as well as being of interest to specialists in the field.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans.
Volume 95: Household Use of Solid Fuels and High-temperative Frying.
2010, pp. 430, ISBN: 978-92-832-1295-9.
IARC, Lyon, France.

This volume considers household use of solid fuels for heating and cooking, a practice that can generate substantial quantities of indoor air pollution. Emissions from household use of solid fuels are complex mixtures containing thousands of chemical compounds at varying concentrations and these may be admixed and adsorbed to particulate matter of widely varying dimensions. Some of these compounds are known to cause cancer, however few epidemiological studies and cancer bioassays have investigated the potential cancer risk of solid fuels, mainly wood and other biomass.

This volume presents comprehensively the current knowledge on this important field of carcinogenesis.

Debating Human Genetics. Contemporary Issues in Public Policy and Ethics.
By A. Plows.
2010, pp. 232, £25.99, ISBN: 978-0-415-45109-3.
Rutledge, Taylor & Francis Group, Abingdon, Oxon, UK.

Human genetics is impacting on the public sphere in many different settings, in specific contexts such as genetic testing, and increasingly the catalyst for public engagement. This book presents situated examples of how different publics in Britain are encountering and framing the debates on "human genetics". Contents: 1. Methodolgy and public overview; 2. Stem cells and cloning; 3. Biobanks and databases; 4. "PharmacoG" as product and process; 5. Genetic testing and screening; 6. Genetic exceptionalism, health, identity and citizenship; 7. Informed consent, individual choice; 8. Futures talk.