Journal Of Cancer Therapy

Oncologic TherapiesCold Plasma Cancer TherapyAnti-Angiogenesis Strategies in Cancer TherapiesNanostructures for Cancer TherapyRecent Advances in Cancer Research and TherapyControversies in the Treatment of Lung CancerNanoparticles in Cancer Therapy: Novel Concepts, Mechanisms and ApplicationsPrinciples and Practice of the Biologic Therapy of CancerMesenchymal Stem Cells in Cancer TherapySel f-Eating on Demand: Autophagy in Cancer and Cancer TherapyGene Therapy of CancerUnits, Symbols and AbbreviationsCancer: New Insights for the Healthcare Professional: 2011 EditionNanobiomaterials in Cancer TherapyMolecular Cancer TherapeuticsNanomedicines for Breast Cancer TheranosticsDNA Repair in Cancer TherapyGene Therapy for CancerStereotactic Body Radiation TherapyAnticancer Treatments and CardiotoxicityOncolytic Viruses - Genetically Engineering the Future of Cancer TherapyNovel Approaches and Strategies for Biologics, Vaccines and Cancer TherapiesGPCR Signaling in CancerApoptosis, Senescence and CancerSuccesses and Limitations of Targeted Cancer TherapyDisease Control Priorities, Third Edition (Volume 3)Neurologic Complications of Cancer TherapyOutside the Box Cancer TherapiesCancer Immunology: Innovative Approaches to TherapyFunctional Foods in Cancer Prevention and TherapyNanomedicine and Cancer TherapiesDNA Topoisomerases in Cancer TherapyCancer GenomicsElectroporation-Based Therapies for CancerAmerican Journal of CancerDrug Repurposing

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Oncologic Therapies

In the mid 80's type I and II enzymes were found to be the intracellular targets of a number of efficacious anticancer drugs such as doxorubicin, mitoxantrone, etoposide and camptothecin as a result of a continued efforts of many investigators, especially Leroy Liu and his collaborators at Johns Hopkins University. Readers will find a series of chapters written by researchers actively engaged in the expanding field of topoisomerase and their inhibitors. The series of chapters cover review articles on pharmacology and the molecular mechanism of topoisomerase I- and II-targeting anticancer drugs in mammals and in the yeast Saccharomyces cerevisiae, which has proved to be a superb model organism for studies of anticancer drugs. This volume compiles up-to-date information on the topoisomerase-targeting compounds in clinical and preclinical development as a useful and important reference book for students and researchers in the field of pharmacology, toxicology, oncology and molecular biology.

Cold Plasma Cancer Therapy

Cancer: New Insights for the Healthcare Professional: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive

information about Cancer. The editors have built Cancer: New Insights for the Healthcare Professional: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Cancer in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Cancer: New Insights for the Healthcare Professional: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Anti-Angiogenesis Strategies in Cancer Therapies

Nanotechnology in Cancer covers current nanotechnology-based nanotherapeutics involving gold nanoparticles, colloids, gels, magnetic nanoparticles, radiofrequency, gene therapy, biological particles, and the intermolecular interactions associated with nanoparticle based cancer therapy in vivo. Different cancer types and locations are considered alongside the corresponding treatment types, and the use of imaging technologies and animal models are also explored. Both scientific and clinical aspects are considered by authors coming from both fields, with the authors using their

backgrounds from different disciplines to make the connection between cancer and effective drug delivery and therapeutic strategies. Authored by leaders from the scientific research and clinical communities who use their background from different disciplines to explore the connections between cancer and effective drug delivery and therapeutic strategies Brings together tumor biology, imaging technologies, nanomaterial platforms for drug delivery, therapeutic strategies, and reconstructive surgery Explores the clinical and regulatory challenges facing nanomedicine

Nanostructures for Cancer Therapy

Nanobiomaterials in Cancer Therapy presents the major applications of nanobiomaterials in oncology, offering an up-to-date overview of the latest research in this field. Utilizing nanobiomaterials, novel therapeutic approaches enable significant improvements in drug-loading capacity, formulation stability and drug efficiency. In this book, leading researchers from around the world share their expertise and unique insights. The book covers the fabrication methods of platforms for multimodal and combinatorial therapeutic options, along with simultaneous and real-time cancer imaging, and innovative approaches for oncology by passive or active pathways of multifunctional nanocarriers. The work also classifies and discusses engineered nanobiosystems for cancer therapy, prevention, and low cancer recurrence or relapse. This book will be of interest to postdoctoral researchers, professors and

students engaged in the fields of materials science, biotechnology and applied chemistry. It will also be highly valuable to those working in industry, including pharmaceutics and biotechnology companies, medical researchers, biomedical engineers and advanced clinicians. A comprehensive resource for researchers, practitioners and students working in biomedical, biotechnological and engineering fields A valuable guide to recent scientific progress and the latest application methods Discusses novel opportunities and ideas for developing or improving technologies in nanomedicine and nanobiology

Recent Advances in Cancer Research and Therapy

Volume 3, Cancer, presents the complex patterns of cancer incidence and death around the world and evidence on effective and cost-effective ways to control cancers. The DCP3 evaluation of cancer will indicate where cancer treatment is ineffective and wasteful, and offer alternative cancer care packages that are cost-effective and suited to low-resource settings. Main messages from the volume include: -Quality matters in all aspects of cancer treatment and palliation. -Cancer registries that track incidence, mortality, and survival †“ paired with systems to capture causes of death are important to understanding the national cancer burden and the effect of interventions over time. -Effective interventions exist at a range of prices. Adopting "resource appropriate" measures which allow the most effective treatment for the greatest number of

people will be advantageous to countries. -Prioritizing resources toward early stage and curable cancers is likely to have the greatest health impact in low income settings. -Research prioritization is no longer just a global responsibility. Providing cancer treatment requires adequate numbers of trained healthcare professionals and infrastructure beyond what is available in most LMICs, especially low income countries. Careful patient monitoring is a requirement of good quality cancer care and this often involves laboratory tests in addition to clinical examination. Even if financing were immediately available to build or expand a cancer control system, reaching capacity will take many years.

Controversies in the Treatment of Lung Cancer

Drug Repurposing in Cancer Therapy: Approaches and Applications provides comprehensive and updated information from experts in basic science research and clinical practice on how existing drugs can be repurposed for cancer treatment. The book summarizes successful stories that may assist researchers in the field to better design their studies for new repurposing projects. Sections discuss specific topics such as in silico prediction and high throughput screening of repurposed drugs, drug repurposing for overcoming chemoresistance and eradicating cancer stem cells, and clinical investigation on combination of repurposed drug and anticancer therapy. Cancer researchers, oncologists, pharmacologists and several members of biomedical field who are interested in

learning more about the use of existing drugs for different purposes in cancer therapy will find this to be a valuable resource. Presents a systematic and up-to-date collection of the research underpinning the various drug repurposing approaches for a quick, but in-depth understanding on current trends in drug repurposing research Brings better understanding of the drug repurposing process in a holistic way, combining both basic and clinical sciences Encompasses a collection of successful stories of drug repurposing for cancer therapy in different cancer types

Nanoparticles in Cancer Therapy: Novel Concepts, Mechanisms and Applications

With the thorough understanding of stem cell biology and the advent of targeted therapeutics for cancer, stem cell-based therapeutic strategies are being increasingly explored for the treatment of various cancer types. Mesenchymal Stem Cells in Cancer Therapy sheds light on current stem cell based targeted therapies for cancer, by focusing on the application of mesenchymal stem cells (MSC) in various cancers with emphasis on a number of aspects that are critical to the success of future stem cell based therapies for cancer. Sections of this publication are devoted to developing stem cell based therapies for cancer with the main focus on tumoritrophic properties of stem cells, engineering targeted therapeutics, utilization of imaging techniques and the recent combination studies utilizing currently employed therapeutics with stem

cells. Mesenchymal Stem Cells in Cancer Therapy informs readers about critical and cutting edge stem cell therapies for cancer and also enables them to appreciate the vast plain of unresolved questions in stem cell research for cancer therapeutics. Includes biological foundation on key sources of mesenchymal stem cells and the various ways they can be utilized to treat cancer. Provides examples of current MSC based cancer therapies and prospects for the future with insights from the leading lab on cancer cell therapies. Technically advanced topic written for widespread understanding for clinical and research audiences.

Principles and Practice of the Biologic Therapy of Cancer

The three sections of this volume present currently available cancer gene therapy techniques. Part I describes the various aspects of gene delivery. In Part II, the contributors discuss strategies and targets for the treatment of cancer. Finally, in Part III, experts discuss the difficulties inherent in bringing gene therapy treatment for cancer to the clinic. This book will prove valuable as the volume of preclinical and clinical data continues to increase.

Mesenchymal Stem Cells in Cancer Therapy

Natural Compounds in Cancer Therapy is a classic reference work for patients and medical professionals interested in use of nontoxic botanical compounds in

the treatment of cancer. It offers a snapshot of the field circa 2001, and its insights are still pertinent today. Natural Compounds in Cancer Therapy is among the first books to discuss the use of natural products against cancer from a systems biology perspective.

Self-Eating on Demand: Autophagy in Ca ncer and Cancer Therapy

Nanostructures for Cancer Therapy discusses the available preclinical and clinical nanoparticle technology platforms and their impact on cancer therapy, including current trends and developments in the use of nanostructured materials in chemotherapy and chemotherapeutics. In particular, coverage is given to the applications of gold nanoparticles and quantum dots in cancer therapies. In addition to the multifunctional nanomaterials involved in the treatment of cancer, other topics covered include nanocomposites that can target tumoral cells and the release of antitumoral therapeutic agents. The book is an up-to-date overview that covers the inorganic and organic nanostructures involved in the diagnostics and treatment of cancer. Provides an examination of nanoparticle delivery systems for cancer treatment, illustrating how the use of nanotechnology can help provide more effective chemotherapeutic treatments Examines, in detail, the different types of nanomaterials used in cancer therapy, also explaining the effect of each Provides a cogent overview of recent developments in the use of nanostructured

materials in chemotherapeutics, allowing readers to quickly familiarize themselves with this area

Gene Therapy of Cancer

Anti-angiogenesis Strategies in Cancer Therapeutics provides a detailed look at the current status and future directions in the discovery and development of novel anti-angiogenesis strategies in oncology. This book highlights the different mechanisms involved in the modulation of angiogenesis, including inflammation, thrombosis, and microRNA, and shows how nanotechnology can further enhance the potential of existing and new anti-angiogenesis approaches. Written for industry scientists, researchers, oncologists, hematologists, and professors and students in the field, this comprehensive book covers all aspects of anti-angiogenesis strategies and their differences. Covers important preclinical models and clinical trials in the discovery and development of novel anti-angiogenesis agents Reviews FDA-approved anti-angiogenesis agents Illustrates the value of nanotechnology in improving the utility of anti-angiogenesis agents Offers insight into the development of novel anti-angiogenesis agents and future direction in this area

Units, Symbols and Abbreviations

This volume is the second in the 'Cancer Treatment and Research' series focussing on basic and clinical tumor immunology. It has a rather different focus or

emphasis from that of the first volume, published two years ago. That work (Basic and Clinical Tumor Immunology, R.B. Herberman, ed., Martinus Nijhoff Publishers, 1983) devoted considerable attention to up dated summaries in various areas of classical tumor immunology: specific antitumor immunity, the immunologic competence of cancer patietns, char acterization of human tumor-associated antigens, the ability to propagate specifically immune T cells in culture in the presence of interleukin 2, and the use of such cells for adoptive immunotherapy of established tumors. of evidence concerning the immune However, it also reviewed the status surveillance hypothesis and pointed out the need to consider non-T cell mediated mechanisms of host resistance. In particular, one chapter sum marized information on the role of macrophages in host resistance against tumors. The present volume continues to emphasize one of the major themes of the first volume, innovative approaches to the therapy of cancer. It involves contributions from leading investigators on several primary types of therapeutic interventions related to monoclonal antibodies, the col laboration of monoclonal antibodies with macro phages to mediate antibody dependent cellular cytotoxicity, lymphokines, tumor vaccines, and natural killer cells. It also has an up-to-date summary of the immunologic aspects of the exciting and promising work being performed on human T cell leukemia virus in the laboratory of Dr. Robert Gallo.

Cancer: New Insights for the Healthcare Professional: 2011 Edition

Aiding researchers seeking to eliminate multi-step procedures, reduce delays in treatment and ease patient care, Cancer Theranostics reviews, assesses, and makes pertinent clinical recommendations on the integration of comprehensive in vitro diagnostics, in vivo molecular imaging, and individualized treatments towards the personalization of cancer treatment. Cancer Theranostics describes the identification of novel biomarkers to advance molecular diagnostics of cancer. The book encompasses new molecular imaging probes and techniques for early detection of cancer, and describes molecular imaging-guided cancer therapy. Discussion also includes nanoplatforms incorporating both cancer imaging and therapeutic components, as well as clinical translation and future perspectives. Supports elimination of multi-step approaches and reduces delays in treatments through combinatorial diagnosis and therapy Fully assesses cancer theranostics across the emergent field, with discussion of biomarkers, molecular imaging, imaging guided therapy, nanotechnology, and personalized medicine Content bridges laboratory, clinic, and biotechnology industries to advance biomedical science and improve patient management

Nanobiomaterials in Cancer Therapy

The Second Edition of Gene Therapy of Cancer provides crucial updates on the basic science and ongoing research in this field, examining the state of the art technology in gene therapy and its therapeutic applications to the treatment of cancer. The clinical

chapters are improved to include new areas of research and more successful trials. Chapters emphasize the scientific basis of gene therapy using immune, oncogene, antisense, pro-drug activating, and drug resistance gene targets, while other chapters discuss therapeutic approaches and clinical applications. This book is a valuable reference for anyone needing to stay abreast of the latest advances in gene therapy treatment for cancer. Key Features * Provides in-depth description of targeted systems and treatment strategies * Explains the underlying cancer biology necessary for understanding a given therapeutic approach * Extensively covers immune therapeutics of vaccines, cytokines, and peptide-induced responses * Presents translational focus with emphasis on requirements for clinical implementation * Incorporates detailed illustrations of vectors and therapeutic approaches ideal for classroom presentations and general reference

Molecular Cancer Therapeutics

Nanomedicines for Breast Cancer Theranostics

The ability to genetically engineer oncolytic viruses in order to minimize side effects and improve the selective targeting of tumor cells has opened up novel opportunities for treating cancer. Understanding the mechanisms involved and the complex interaction between the viruses and the immune system will undoubtedly help guide the development of new

strategies. Theranostic biomarkers to monitor these therapies in clinical trials serve an important need in this innovative field and demand further research.

DNA Repair in Cancer Therapy

Nanotechnology has the power to radically change the way cancer is diagnosed, imaged, and treated. The holistic approach to cancer involves noninvasive procedures that emphasize restoring the health of human energy fields. Presenting a wealth of information and research about the most potent cancer healing therapies, this forward-thinking book explores how nanomedicine, holistic medicine, and other cancer therapies play important roles in treatment of this disease. Topics include nanobiotechnology for antibacterial therapy and diagnosis, mitochondrial dysfunction and cancer, antioxidants and combinatorial therapies, and optical and mechanical investigations of nanostructures for biomolecular detection.

Gene Therapy for Cancer

Novel Approaches and Strategies for Biologics, Vaccines and Cancer Therapies takes a look at the current strategies, successes and challenges involved with the development of novel formulations of biologics, vaccines and cancer therapy. This thorough reference on the latest trends in the development of diverse modalities will appeal to a broad community of scientists, students and clinicians. Written by leading authors across academia and industry, this

book covers important topics such as unique drug delivery devices, non-parenteral delivery trends, novel approaches to the treatment of cancer, immunotherapy and more. It includes real-world cases and examples which highlight formulations with therapeutic proteins, monoclonal antibodies, peptides and biobetters, as well as cases on novel vaccines formulations including evolving pathogens, novel modalities of vaccines, universal vaccines. This book is a thorough and useful resource on the development of novel biologics, vaccines and cancer therapies. Provides strategies for the development of safe and efficacious novel formulations for various modalities of biologics, vaccines and for cancer therapy Highlights novel cases from current clinical trials as well as marketed products Reviews overall successes and challenges in the development of novel formulations, including new molecular targets for the treatment of diseases, design of target-specific therapies, regulatory considerations, individualized therapies

Stereotactic Body Radiation Therapy

Functional Foods in Cancer Prevention and Therapy presents the wide range of functional foods associated with the prevention and treatment of cancer. In recent decades, researchers have made progress in our understanding of the association between functional food and cancer, especially as it relates to cancer treatment and prevention. Specifically, substantial evidence from epidemiological, clinical and laboratory studies show

that various food components may alter cancer risk, the prognosis after cancer onset, and the quality of life after cancer treatment. The book documents the therapeutic roles of well-known functional foods and explains their role in cancer therapy. The book presents complex cancer patterns and evidence of the effective ways to control cancers with the use of functional foods. This book will serve as informative reference for researchers focused on the role of food in cancer prevention and physicians and clinicians involved in cancer treatment.

Anticancer Treatments and Cardiotoxicity

This second edition has been updated in a user-friendly layout that makes its comprehensive information extremely accessible. The handbook, written for all physicians who treat cancer patients, provides a survey of current therapeutic concepts of solid tumors and hematologic malignancies in internal oncology. Each individual chapter of this shortened new edition is structured in the same way and features a brief outline or tabular summary of the main aspects of epidemiology, pathology, staging, and diagnosis. The main focus is on the therapeutic strategy, i.e., an interdisciplinary approach to systemic drug therapy. Surgical and radiological concepts of treatment are also covered, as are supportive care, pain relief methods and ethical problems. This title is a must for clinicians and practitioners as well as interns, residents and postgraduate students.

Oncolytic Viruses - Genetically Engineering the Future of Cancer Therapy

Cancer continues to be one of the major causes of death throughout the developed world, which has led to increased research on effective treatments. Because of this, in the past decade, rapid progress in the field of cancer treatment has been seen. Recent Advances in Cancer Research and Therapy reviews in specific details some of the most effective and promising treatments developed in research centers worldwide. While referencing advances in traditional therapies and treatments such as chemotherapy, this book also highlights advances in biotherapy including research using Interferon and Super Interferon, HecI based and liposome based therapy, gene therapy, and p53 based cancer therapy. There is also a discussion of current cancer research in China including traditional Chinese medicine. Written by leading scientists in the field, this book provides an essential insight into the current state of cancer therapy and treatment. Includes a wide range of research areas including a focus on biotherapy and the development of novel cancer therapeutic strategies. Formatted for a broad audience including all working in researching cancer treatments and therapies. Discusses special traits and results of Chinese cancer research.

Novel Approaches and Strategies for Biologics, Vaccines and Cancer Therapies

Macroautophagy, the major lysosomal pathway for recycling intracellular components including whole organelles, has emerged as a key process modulating tumorigenesis, tumor–stroma interactions, and cancer therapy. An impressive number of studies over the past decade have unraveled the plastic role of autophagy during tumor development and dissemination. The discoveries that autophagy may either support or repress neoplastic growth and contextually favor or weaken resistance and impact antitumor immunity have spurred efforts from many laboratories trying to conceptualize the complex role of autophagy in cancer using cellular and preclinical models. This complexity is further accentuated by recent findings highlighting that various autophagy-related genes have roles beyond this catabolic mechanism and interface with oncogenic pathways, other trafficking and degradation mechanisms and the cell death machinery. From a therapeutic perspective, knowledge of how autophagy modulates the tumor microenvironment is crucial to devise autophagy-targeting strategies using smart combination of drugs or anticancer modalities. This eBook contains a collection of reviews by autophagy researchers and provides a background to the state-of-the-art in the field of autophagy in cancer, focusing on various aspects of autophagy regulation ranging from its molecular components to its cell autonomous role, e.g. in cell division and oncogenesis, miRNAs regulation, cross-talk with cell death pathways as well as cell non-autonomous role, e.g. in secretion, interface with tumor stroma and clinical prospects of autophagy-based biomarkers and autophagy modulators in anticancer therapy. This eBook is part

of the TransAutophagy initiative to better understand the clinical implications of autophagy in cancer.

GPCR Signaling in Cancer

'Light' from low level laser therapy, through a process called photobiomodulation (PBM), has been in existence in supportive care in cancer, in particular in the management of oral mucositis (OM) in patients undergoing chemotherapy, radiation therapy and haematopoietic stem cell transplantation. In this book the authors attempt to portray the current status of the supportive care interventions that are possible with PBM using low level laser therapy (LLLT) in patients undergoing cancer treatment for solid tumours, harmatological malignancies, and head and neck cancers.

Apoptosis, Senescence and Cancer

The treatment of patients with advanced malignancies has undergone remarkable change in the last few years. While in the past decisions about systemic therapy were largely based on the performance status of a patient, oncologists today also take into account the pathological and molecular characteristics of the patient’s tumor. Targeting specific molecular pathways important for tumorigenesis has become the preferred way of treatment for many types of malignancies. With these advances come new challenges including the optimization of therapy, recognizing and dealing with side effects and, importantly, the development of

resistance. This book provides an up-to-date overview of the advances and limitations of targeted therapy for several tumor entities including breast cancer, colon cancer, gastrointestinal stromal tumors, lung cancer, melanoma, ovarian cancer and renal cell carcinoma. Written by over a dozen internationally renowned scientists, the book is suitable for advanced students, postdoctoral researchers, scientists and clinicians who wish to update their knowledge of the latest approaches to targeted cancer therapies.

Successes and Limitations of Targeted Cancer Therapy

Now in its fifth edition, this guide sets out international and standard practice and is a useful reference for medical and scientific editors and authors.

Disease Control Priorities, Third Edition (Volume 3)

Cancer Genomics addresses how recent technological advances in genomics are shaping how we diagnose and treat cancer. Built on the historical context of cancer genetics over the past 30 years, the book provides a snapshot of the current issues and state-of-the-art technologies used in cancer genomics. Subsequent chapters highlight how these approaches have informed our understanding of hereditary cancer syndromes and the diagnosis, treatment and outcome in a variety of adult and pediatric solid tumors and hematologic malignancies. The dramatic increase in

cancer genomics research and ever-increasing availability of genomic testing are not without significant ethical issues, which are addressed in the context of the return of research results and the legal considerations underlying the commercialization of genomic discoveries. Finally, the book concludes with "Future Directions", examining the next great challenges to face the field of cancer genomics, namely the contribution of non-coding RNAs to disease pathogenesis and the interaction of the human genome with the environment. Tools such as sidebars, key concept summaries, a glossary, and acronym and abbreviation definitions make this book highly accessible to researchers from several fields associated with cancer genomics. Contributions from thought leaders provide valuable historical perspective to relate the advances in the field to current technologies and literature.

Neurologic Complications of Cancer Therapy

Provides insight into established practices and research into apoptosis and senescence by examining techniques and research in the fields of cell death pathways, senescence growth arrest, drugs and resistance, DNA damage response, and other topics which still hold mysteries for researchers. This book concludes with established cancer therapies.

Outside the Box Cancer Therapies

Electroporation-Based Therapies for Cancer reviews

electroporation-based clinical studies in hospitals for various cancer treatments, including melanomas, head and neck cancers, chest wall breast carcinomas, and colorectal cancers, as well as research studies in the lab using cell lines, primary cells, and animals. Cancer kills about one American per minute, amounting to over 500,000 deaths in the United States and millions, worldwide, each year. There is a critical need for safe, effective, and affordable alternative treatment modalities, especially for inoperable, recurring, and chemo-resistant cancers, that do not respond well to current treatment regimen. An electrical-pulse-mediated, enhanced drug delivery technique known as electroporation is one way to effectively treat these patients. This technique is especially suitable for low- and middle-income countries, where lack of infrastructure and resources leads to cancer diagnoses at late stages. This quick, safe, effective, economical, out-patient-based technique is a boon to these patients for palliative and other care with enhanced quality of life. This book features discussions by interdisciplinary authors—including practicing oncological surgeons, medical professionals, and academic and other researchers—of the basics and clinical medical applications of electroporation. Provides novel and recent clinical applications of electrochemotherapy for various cancers, including melanomas, sarcomas, superficial extreme melanoma, chest wall breast carcinoma, and colorectal cancers Extensive study of a number of cell lines, including human breast cancer, lung cancer, cervical cancer, leukemia, and mouse breast cancer using both reversible and irreversible electroporation techniques In vitro study of delivery of

various commonly prescribed/administered breast cancer chemo and hormone drugs, such as Doxorubicin, Paclitaxel, Bleomycin, and Tamoxifen

Cancer Immunology: Innovative Approaches to Therapy

Cold atmospheric plasma (CAP) emerges as a possible new modality for cancer treatment. This book provides a comprehensive introduction into fundamentals of the CAP and plasma devices used in plasma medicine. An analysis of the mechanisms of plasma interaction with cancer and normal cells including description of possible mechanisms of plasma selectivity is included. Recent advances in the field, the primary challenges and future directions are presented.

Functional Foods in Cancer Prevention and Therapy

Anticancer Treatments and Cardiotoxicity: Mechanisms, Diagnostic and Therapeutic Interventions presents cutting edge research on the adverse cardiac effects of both radiotherapy and chemotherapy, brought together by leaders in the field. Cancer treatment-related cardiotoxicity is the leading cause of treatment-associated mortality in cancer survivors and is one of the most common post-treatment issues among survivors of adult cancer. Early detection of the patients prone to developing cardiotoxicity, taking in to account the type of treatment, history and other risk factors, is essential

in the fight to decrease cardiotoxic mortality. This illustrated reference describes the most effective diagnostic and imaging tools to evaluate and predict the development of cardiac dysfunction for those patients undergoing cancer treatment. In addition, new guidelines on imaging for the screening and monitoring of these patients are also presented. Anticancer Treatments and Cardiotoxicity is an essential reference for those involved in the research and treatment of cardiovascular toxicity. Provides algorithms essential for the use of imaging, and biomarkers for the screening and monitoring of patients Written by world-leading experts in the field of cardiotoxicity Includes high-quality images, case studies, and test questions Describes the most effective diagnostic and imaging tools to evaluate and predict the development of cardiac dysfunction for those patients undergoing cancer treatment

Nanomedicine and Cancer Therapies

Stereotactic body radiation therapy (SBRT) has emerged as an important innovative treatment for various primary and metastatic cancers. This book provides a comprehensive and up-to-date account of the physical/technological, biological, and clinical aspects of SBRT. It will serve as a detailed resource for this rapidly developing treatment modality. The organ sites covered include lung, liver, spine, pancreas, prostate, adrenal, head and neck, and female reproductive tract. Retrospective studies and prospective clinical trials on SBRT for various organ sites from around the world are examined, and

toxicities and normal tissue constraints are discussed. This book features unique insights from world-renowned experts in SBRT from North America, Asia, and Europe. It will be necessary reading for radiation oncologists, radiation oncology residents and fellows, medical physicists, medical physics residents, medical oncologists, surgical oncologists, and cancer scientists.

DNA Topoisomerases in Cancer Therapy

Since the invention of nanomedicine decades ago, considerable progresses have been made, especially with cancer as a target. Nanoparticles have been proven to be powerful imaging tools or potent agents for cancer diagnosis, treatment and prevention. Active research spread from fundamental research to clinical investigations. This topic intends to cover several important aspects in this field including nanocarrier development, gene delivery, intrinsically active nanoparticles, tumor microenvironment, immunology, and toxicity.

Cancer Genomics

Nanomedicines for Breast Cancer Theranostics addresses the translational aspects and clinical perspectives of breast cancer nanomedicine from a multidisciplinary perspective. The book summarizes research efforts at the preclinical and clinical stage of nanostructures and nanomedicine for dealing with the important challenge of nanomedicine translation in breast cancer theranostics. This book is an important

resource for those working in both academia and industry, focusing on hot topics in biomaterials, biomedical engineering, drug delivery and oncology. Shows how the discovery of new nanomedicines is leading directly to an increase in the early-stage diagnosis of breast cancer Includes coverage of breast cancer nanomedicine standardization and characterization, highlighting newly developed treatments, diagnostics and treatment monitoring tools Explains why the design of nanobiomaterials make them effective drug carriers when treating breast cancer

Electroporation-Based Therapies for Cancer

Using an accessible, case-history approach, they explore the different types of cancer, the causes of cancer, how proper nutrition can help prevent and treat cancer, the most well-studied supplement to use with cancer treatment, cutting-edge therapies (such as intravenous high dose vitamin C and other studied therapies), and natural solutions to common problems (such as the side effects of chemotherapy and radiation).

American Journal of Cancer

DNA Repair and Cancer Therapy: Molecular Targets and Clinical Applications, Second Edition provides a comprehensive and timely reference that focuses on the translational and clinical use of DNA repair as a target area for the development of diagnostic

biomarkers and the enhancement of cancer treatment. Experts on DNA repair proteins from all areas of cancer biology research take readers from bench research to new therapeutic approaches. This book provides a detailed discussion of combination therapies, in other words, how the inhibition of repair pathways can be coupled with chemotherapy, radiation, or DNA damaging drugs. Newer areas in this edition include the role of DNA repair in chemotherapy induced peripheral neuropathy, radiation DNA damage, Fanconi anemia cross-link repair, translesion DNA polymerases, BRCA1-BRCA2 pathway for HR and synthetic lethality, and mechanisms of resistance to clinical PARP inhibitors. Provides a comprehensive overview of the basic and translational research in DNA repair as a cancer therapeutic target Includes timely updates from the earlier edition, including Fanconi Anemia cross-link repair, translesion DNA polymerases, chemotherapy induced peripheral neuropathy, and many other new areas within DNA repair and cancer therapy Saves academic, medical, and pharma researchers time by allowing them to quickly access the very latest details on DNA repair and cancer therapy Assists researchers and research clinicians in understanding the importance of the breakthroughs that are contributing to advances in disease-specific research

Drug Repurposing in Cancer Therapy

This reference on the biologic therapy of cancer provides scientific and practical information to both researchers and clinicians involved in the

development and application of new cancer treatments. Major sections of the book cover: cytokines; cell transfer therapy; monoclonal antibodies; cancer vaccines; gene therapy; and antiangiogenesis therapy. Each section begins with basic principles and preclinical studies, and proceeds to clinical applications. The clinical chapters present comprehensive analyses of clinical data, emphasizing the indications for treatment and the practical guidelines necessary to safely apply these new approaches.

Mitigation of Cancer Therapy Side-Effects with Light

Under the auspices of the 12th International Symposium on Special Aspects in Radiotherapy 2008 in Berlin, acknowledged experts presented their perspectives on small and non-small cell lung cancer, reflecting the latest standards and engaging in controversies in the diagnosis and treatment of this disease.In the first part of this volume, aspects of the diagnostic workup are highlighted from the histopathologist's point of view, followed by presentations concerning the value of PET-CT and whole-body MRI in the staging of lung cancer. The use and current methods in bronchoscopy, endoscopic ultrasound, video-endoscopy and mediastinoscopy are discussed in detail. The second section presents surgical and radio-oncological treatment concepts for stage I/II non-small cell lung cancer including stereotactic radiotherapy. The third section outlines the curative options for stage III NSCLC: extended

surgical approaches , definitive radiochemotherapy and current concepts in adjuvant therapies. Emphasis is also placed on altered fractionation schemes in radiotherapy. Section 4 is dedicated to palliative procedures and the last section gives an in-depth presentation of small cell lung cancer.This book provides an excellent overview of up-to-date standards and future strategies in lung cancer treatment. It will be of great value to surgeons, radiation oncologists, pulmonary specialists and other clinicians interested in this disease.

Nanotechnology in Cancer

GPCR Signaling in Cancer, Volume 145, the latest release in the Advances in Cancer Research series, highlights recent developments in the area of GPCRs and cancer biology. Chapters included in this volume cover several GPCRs and their downstream effectors as case examples to highlight their fundamental understanding and therapeutic potential. Specific chapters address the Role of GRKs and beta-arrestins in cancer, Atypical GPCRs in cancer, the Role of a chemokine receptor (CCR) 5 in cancer, Targeting G protein-coupled receptors for therapeutics in cancer, Emerging GPCR signaling pathways in cancer, and more. G protein-coupled receptors (GPCRs) constitute a large family of cell surface receptors which are involved in nearly every cellular and physiological event. These receptors can recognize a broad array of ligands and they are targeted by nearly one third of the currently prescribed drugs including anti-cancer therapeutics.

Natural Compounds in Cancer Therapy

Molecular Cancer Therapeutics covers state-of-the-art strategies to identify and develop cancer drug target molecules and lead inhibitors for clinical testing. It provides a thorough treatment of drug target discovery, validation, and development. The introductory chapters provide an overview of pathways to discovery and development of molecular cancer therapeutics. Subsequent chapters progress from initial stages of drug target discovery to drug discovery, development, and testing in preclinical and clinical models. Topics include drug lead screening, drug-to-lead development, proof-of-concept studies, medicinal chemistry issues, intellectual property concerns, and clinical development. This invaluable reference promotes understanding of steps involved in developing drug leads for industrial partnering and development. It provides an overview of the strategies for discovery and validation of drug target molecules, and discusses cell- and molecule-based drug screening strategies, as well as mouse models for cancer. Coverage also includes how to refine drug leads for suitability in clinical testing, the special issues of clinical testing of molecular-targeted drugs, and intellectual property concerns.

Cancer Theranostics

Neurologic side effects of cancer therapy can inhibit treatment, can be dose-limiting and can diminish quality-of-life. Neurotoxicity related to cancer therapy is a common problem in oncology practice and in

clinical neurology. Recognition of neurologic complications of anticancer therapy is necessary due to potential confusion with metastatic disease, paraneoplastic syndromes or comorbid neurologic disorders that do not require reduction or discontinuation of therapy. Neurologic Complications of Cancer Therapy provides comprehensive coverage of the recognition and management of neurologic symptoms related to cancer therapy. The book includes sections on systemic therapy discussed by both agent and adverse event. The section on adverse events is particularly valuable to clinicians, allowing them to consult by symptom in cases where multiple agents have been administered and the source of the complication is uncertain. The systemic therapy section includes coverage of immunologic agents, biologics, and targeted therapies. The book also features sections on the complications of radiation therapy, complications of surgery and high-dose chemotherapy, and stem cell transplantation. Neurologic Complications of Cancer Therapy Features: A widely recognized team of editors Systemic therapy covered by therapeutic agent and by adverse event, enabling a "problem-oriented" approach for the clinician Coverage of newer modalities including immunologic agents, biologics, and targeted therapies Complete sections on complications of radiation therapy, surgery, high-dose chemotherapy, and stem-call transplantion

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