

## 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.

### **Cell-based Cancer Immunotherapy. 1st Edition, Volume 183.**

*Edited by A. Garg, L. Galluzzi.*  
2024, pp 318, EUR 144.16, ISBN: 9780443139963.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Cell-based Cancer Immunotherapy, Volume 183* provides the latest progress concerning research on anticancer cellular immunotherapies and their immunological, translation, or clinical aspects. Topics covered in this volume include Methods behind clinical DC vaccine products against glioblastoma, Fully closed and automated isolation of natural blood dendritic cells for cancer immunotherapy, Methods behind Oncolytic virus-based DC vaccines in cancer: towards a multiphase combined treatment strategy for Glioblastoma (GBM) patients, Identification of TCR repertoire patterns linked with anti-cancer immunotherapy, Training of epitope-TCR prediction models with healthy donor-derived cancer-specific T cells, Methods behind neoantigen predictions for anticancer vaccines, Methods behind CD137L-DC-EBV-VAX anticancer vaccine, and much more.

Additional sections cover Gold Standard Assessment of Immunogenic Cell Death Induced by Photodynamic Therapy: From In Vitro to Tumor Mouse Models and Anti-Cancer Vaccination Strategies, Methods behind TCR analyses for colorectal cancer-associated TILs, The use of xCELLigence, Incucyte, and/or Cr/LDH/maker-release assays, Humanized mouse models for anti-cancer therapy, In vitro re-challenge of CAR T cells, Methods behind adoptively transferred tumor draining lymphocytes for anticancer immunotherapy, and A murine glioblastoma platform to test cellular therapies with the standard of care.

### **Translational Bioinformatics. 1st Edition, Volume 139.**

*Edited by V. Kumar Prajapati, R. Donev.*  
2024, pp 520, EUR 109.92, ISBN: 9780443193491.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Translational Bioinformatics* is an emerging field in the direction of biomedical research. High throughput technologies can be applied to the generated biological data to develop the vaccine and personalized medicine. This volume consists of the chapters from different stalwart of the field covering the topics such as

drug development, vector engineering, vaccine development and translational genomics. Chapters covered in this volume discuss the translational research related with cancer, Alzheimer disease and cardiovascular diseases. This volume includes the chapter describing the importance of computational resources and chemoinformatics for the translational health research. How Omics studies are helping to translate the laboratory data into the development of tools which are beneficial in the clinics have been described. How translational bioinformatics is helpful in plant genomics to improve the crops have also been included in this volume. This volume has a chapter which describes the secrets of resistance development and further how these resistances are associated with human infectious diseases. This volume will be useful to the early career researcher in the development of research idea and develop their methodologies in the direction of bioinformatics and it will also give the insight to translate their findings.

### **Aging. How Aging Works, How We Reverse Aging, and Prospects for Curing Aging Diseases. 1st Edition.**

*Edited by M. Fossel.*  
2024, pp 272, EUR 128.84, ISBN: 9780443155017.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Aging: How Aging Works, How We Reverse Aging, and Prospects for Curing Aging Diseases* explains the process of aging beyond mere entropy, exposing it as a complicated and dynamic process that undercuts maintenance and permits age-related disease. With a deeper understanding of the aging process, intervention becomes both easy to understand and clinically feasible.

With a solid academic approach, this proposed book builds upon the substantial work published over the past 20 years, citing the newest data, up-to-date models based upon that data, and the implications for improved clinical intervention, including recent developments in gene and cell therapy. Coverage of age-related diseases includes neurodegenerative, cardiovascular, bone and joint, immune system, renal, pulmonary, and skin aging. Future directions of the field focus on interventions, including a summary of previous attempts to intervene in aging and age-related disease, the status of current research, and proposed biotech interventions, as well as their potential obstacles, risks, and benefits.

This is the perfect reference for scientists, clinicians, and researchers interested in the translational research opportunities such as drug discovery, pharmacogenetics, and experimental therapeutics, not only summarizing where the field stands, but giving a clear and cogent view of where clinical medicine is going in the next decade.

*Key Features:* Provides a sophisticated, accurate, and clear explanation of aging; Gives a clear explanation of the fundamental role of cell aging in age-related disease; Offers a unified model for the role of epigenetic and telomere changes in cell aging; Outlines effective approaches to intervention in the fundamental aging process; Introduces upcoming interventions intended to both cure and prevent age-related diseases.

**RNA Therapeutics Part A. 1st Edition, Volume 203.***Edited by D.-T. Chu, V. Thai Than.*

2024, pp 485, EUR 109.92, ISBN: 9780443223150.

Academic Press, Elsevier, Cambridge, MA, USA.

*RNA Therapeutics, Part A, Volume 203* presents the latest on a new class of medication based on RNA molecules. The book includes timely chapters that focus on An introduction to RNA therapeutics and potentials, The development and technologies of RNA therapeutics, Types of RNA therapeutics, Molecular mechanisms of RNA therapeutics, IT, and AI applications in RNA therapeutics, The application of data sciences and bioinformatics in RNA therapeutics, RNA therapeutics history and future perspectives, Recent applications of RNA therapeutic in clinics, Advantages and disadvantages of RNA therapeutics, RNA therapeutics for neurological disease, RNA therapeutics for metabolic disorders, and RNA therapeutics for metabolic disorders.

**Fluorine Metabolism, Transport and Enzymatic Chemistry.****1st Edition, Volume 696.***Edited by R. Stockbridge.*

2024, pp 696, EUR 127.94, ISBN: 9780443236440.

Academic Press, Elsevier, Cambridge, MA, USA.

*Fluorine Metabolism, Transport and Enzymatic Chemistry, Volume 696* in the *Methods in Enzymology* series, highlights new advances in the field, with this new volume presenting interesting topics on Fluorine Metabolism, Transport, and Enzymatic Chemistry. Chapters in this new release include Determination of fluoride sensitivity and resistance in oral biofilm models, NMR methods to detect fluoride binding and transport by membrane proteins, Biotransformation of fluorinated drugs and xenobiotics by the model fungus *Cunninghamella elegans*, Measurement of fluoride efflux from lipid vesicles and cells, Defluorination of PFAS by *Acidimicrobium sp.* A6 and Potential Applications for Remediation, and more.

Additional chapters cover Computational approaches to investigate F- binding, selectivity and transport in F- exporters, Defluorination as a key trait to gauge the biodegradability of fluorinated pollutants: challenges and opportunities, Patch-Clamp Electrophysiology of Fluoride Channels in *Saccharomyces cerevisiae*, and Synthesis of fluorophenylalanine-encoded proteins in HEK cells.

**Liposomes in Drug Delivery.****What, Where, How and When to deliver.***Edited by S.G. Antimisiaris.*

2024, pp 696, EUR 157.68, ISBN: 9780443154928.

Academic Press, Elsevier, Cambridge, MA, USA.

*Liposomes in Drug Delivery: What, Where, How and When to Deliver* is a concise, well-structured reference covering all the important issues related to the potential of this technology.

Organized to provide practical information to researchers from any discipline with a particular therapeutic or bio-active substance to deliver, this book helps readers understand if liposomes can be of benefit for their particular need, what is the best type of liposome to use according to what needs to be delivered, where/when to deliver it, and how to design/prepare/characterize/investigate/optimize liposome properties for a particular application.

The book is structured in Four parts. The first covers in a concise but in-depth way, what liposomes are, which are the liposome types, advantages/disadvantages, and what is their stability, characterization methods, in vitro stability, and in vivo fate after different administration methods (routes). The second part focuses on the different mechanisms for liposomal drug delivery. Methodologies/technologies for manipulation of liposome structure/properties in order to design liposomes for particular delivery applications. Specific roadmaps for liposome design are discussed, including components to incorporate in liposomes for specific types of encapsulated molecules or specific routes of administration. The third part covers liposome applications for drug delivery. It focuses on specific delivery considerations for particular diseases. Finally, the fourth part covers methods of liposome fabrication.

*Key Features:* Focuses on key information - What, Where, How and When to deliver – needed for drug delivery researchers; Covers all aspects of liposomes in drug delivery in one single volume; Guides researchers through the decision process on whether and what liposomes are most applicable to their particular interest.

**Protein Digestion-Derived Peptides. Chemistry, Bioactivity, and Health Effects****1st Edition.***Edited by C. Martinez-Villaluenga, B. Hernandez-Ledesma.*

2024, pp 478, EUR 157.68, ISBN: 9780443154676.

Academic Press, Elsevier, Cambridge, MA, USA.

*Protein Digestion-Derived Peptides: Chemistry, Bioactivity, and Health Effects* presents the latest international advances in fundamental and applied research on the impact of gastrointestinal digestion on the release of bioactive peptides from food sources.

This book covers the fundamentals and applications of gastrointestinal digestion and absorption models as well as the impact of food matrices, their components and protein characteristics, and peptide bioactivity, bioaccessibility, and bioavailability. Moreover, the book expands coverage in vitro and in vivo approaches to simulate gastrointestinal digestion of food proteins and absorption models to evaluate the bioaccessibility and bioavailability of released peptides.

Developed for nutrition researchers, food scientists, and pharmaceutical scientists, this book is a welcomed resource for those who wish to understand the impact of peptides on chronic disease.

*Key Features:* Includes applications, literature reviews, recent developments, and methods; Offers an overview of the main bioactivities of peptides released during the gastrointestinal

digestion of food proteins; Highlights mechanisms of action and health benefits of bioactive peptides released during gastrointestinal digestion.

**Cranial Surgery - Part 1. 1st Edition, Volume 284.**

*Edited by J.C. Ganz.*

2024, pp 358, EUR 185.61, ISBN: 9780443238727.

Academic Press, Elsevier, Cambridge, MA, USA.

This is a study of the evolution of the principles and techniques of cranial surgery from Hippocrates to the nineteenth century. The methods of conveying information by text and image are considered.

**Muscle Stem Cells. 1st Edition, Volume 158.**

*Edited by M. Rudnicki, J. Dilworth.*

2024, pp 486, EUR 135.15, ISBN: 9780128234341.

Academic Press, Elsevier, Cambridge, MA, USA.

*Muscle Stem Cells, Volume 158 in the Current Topics of Developmental Biology* series, highlights new advances in the field, with this new volume presenting interesting chapters on topics surrounding Muscle stem cell dysfunction in rhabdomyosarcoma and muscular dystrophy, Model systems used to study MuSC function, MuSCs in the growth and maintenance of muscle, Molecular regulation of myocyte fusion, A self-made quiescent niche of muscle stem cells, Characterization of the muscle regenerative environment, Role of microenvironment on muscle stem cell function in health, adaptation, and disease, Vascular Niche for Muscle Stem Cells, Regulation of muscle stem cell polarity in health and disease, and more.

Additional chapters cover Circadian timing of satellite cell function and muscle regeneration, Muscle stem cell activity is regulated by translational control of gene expression, Biomechanical stress in modulating MuSC function, Cross talk between cell types in regenerating muscle, Effects of the immune system on muscle regeneration, Effects of diabetes on MuSC function, and other timely topics.

**Advances in Cytometry: Applications. 1st Edition, Volume 186.**

*Edited by J.P. Robinson, P. Chattopadhyay, J. Jacobberger.*

2024, pp 350, EUR 144.16, ISBN: 9780323994200.

Academic Press, Elsevier, Cambridge, MA, USA.

*Advances in Cytometry: Applications, Volume 176 in the Methods in Cell Biology* series, highlights advances in the field, with this new volume presenting interesting chapters on timely topics, including Orthotopic brain tumor models derived from glioblastoma stem-like cells, RNA sequencing in hematopoietic stem cells, Generation of inducible pluripotent stem cells from human dermal fibroblasts, In vitro preparation of dental pulp stem cell grafts combined with biocompatible scaffolds for tissue engineering, Gene expression knockdown in chronic

myeloid leukemia stem cells, Identification and isolation of slow-cycling GSCs, Assessment of CD133, EpCAM, and much more.

*Key Features:* Provides the authority and expertise of leading contributors from an international board of authors; Presents the latest release in the Methods in Cell Biology series; Includes the latest information on the topic of development, characterization and applications in CAR T Cells.

**Techniques for Biochemical Analysis. 1st Edition.**

*Edited by K. Hussain, S. Maqbool Lone, K.Z. Masoodi, S.*

*Minu Balkhi.*

2024, pp 270, EUR 128.84, ISBN: 9780443159145.

Academic Press, Elsevier, Cambridge, MA, USA.

*Techniques for Biochemical Analysis* provides researchers with a practical guide for investigating a variety of different biomolecules. It includes a range of tried and tested protocols, outlining the principles upon which each technique is founded, as well as providing instructions on equipment setup and use, buffer preparation, reagents required, safety considerations and analysis of findings. Beginning with an introduction to biochemistry and laboratory procedures, the book moves on to specific methods focused on investigation of carbohydrates, proteins, enzymes, plant hormones, minerals, amino acids, and more.

The large range of protocols covered in this foundational, how-to reference are interdisciplinary and adaptable to a variety of areas, making this an ideal resource for researchers across various fields, including biochemistry, molecular biology, medical sciences, plant physiology, agriculture, and related subjects.

*Key Features:* Features step-by-step methods for biochemical analysis of a variety of compounds; Explores methods that are applicable and adaptable across a variety of fields, including biochemistry, molecular biology, and related areas; Provides detailed instructions on how to prepare buffers, the equipment to be used, and the analysis of a variety of molecules, including carbohydrates, lipids, proteins, and hormones; Contains interdisciplinary and adaptable methods and techniques.

**Overview of Inflammatory Breast Cancer: Updates. 1st Edition, Volume 384.**

*Edited by M. Manai, M. Cristofanilli, H. Boussen.*

2024, pp 277, EUR 154.07, ISBN: 9780443133497.

Academic Press, Elsevier, Cambridge, MA, USA.

*International Review of Cell and Molecular Biology, Volume 381* highlights new advances in the field, with this new volume presenting interesting topic on *Overview of Inflammatory Breast Cancer: Updates*.

*Key Features:* Provides the authority and expertise of leading contributors from an international board of authors; Presents the latest release in International Review of Cell and Molecular Biology; Updated release includes the latest information on Overview of Inflammatory Breast Cancer and Updates.

**Fundamental Principles of Oxidative Stress in Metabolism and Reproduction. Prevention and Management. 1st Edition.**

*Edited by M. Manai, M. Cristofanilli, H. Boussen.*  
2024, pp 368, EUR 128.84, ISBN: 9780443188060.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Fundamental Principles of Oxidative Stress in Metabolism and Reproduction: Prevention and Management* is a comprehensive resource for anyone needing awareness and recognition of oxidative stress as a basic component of disease to determine the precise treatment plan considering the cause of the disease. It describes the effects of oxidative stress in the human body, the detection of metabolic changes, psychological impact and effect on reproductive outcomes. In addition, it discusses alterations at the cellular level occurring due to oxidative stress along with the genetic aspects involved in its pathogenesis.

**Key Features:** Provides a holistic approach to the impact of oxidative stress on various systems; Incorporates recent advances in basic sciences for improvement in oxidative stress leading to better prognosis of metabolic conditions; Summarizes knowledge to detect oxidative stress for improvement of fertility outcomes.

**Current Molecular Targets of Heterocyclic Compounds for Cancer Therapy. 1st Edition.**

*Edited by V. Asati, A. Vaidya.*  
2024, pp 502, EUR 128.84, ISBN: 9780323996327.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Current Molecular Targets of Heterocyclic Compounds for Cancer Therapy* discusses recently developed treatments based on molecular targets which are genetically altered in cancer cells and are essential for tumor development and survival. Considerable research effort has been devoted to the development of targeted drugs that inhibit the action of pathogenic kinases, and clinical studies performed so far have validated the positive effects of kinase inhibitors for cancer treatment. Each chapter discusses a molecular target, such as ALK2, ATR, CK, Src-Abl, EGFR, Fyn-Btk-Lyn, IGFs, and PAK1.

The book's chapters are written by experts who actively work on the targets to help readers fully understand how they can be used. This is a valuable resource for cancer researchers, oncologists, graduate students and members of the biomedical field who are interested in the potential of novel cancer therapies based on molecular targets.

**Key Features:** Discusses recently discovered molecular targets for cancer therapy; Brings updated literature of heterocyclic compounds, an important construction motif for the development of new anticancer drugs; Encompasses comprehensive compilation of recently introduced anticancer drugs in the market and their health outcomes and pharmacoeconomics.

**Reproducibility in Biomedical Research. Epistemological and Statistical Problems and the Future.**

**2nd Edition.**  
*Edited by E.B. Montgomery Jr.*  
2024, pp 464, EUR 98.21, ISBN: 9780443138300.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Reproducibility in Biomedical Research: Epistemological and Statistical Problems, Second Edition* explores the ideas and conundrums inherent in scientific research. This second edition addresses new challenges to reproducibility in biosciences, namely reproducibility of machine learning Artificial Intelligence (AI), reproducibility of translation from research to medical care, and the fundamental challenges to reproducibility. All current chapters are expanded to cover advances in the topics previously addressed. This book provides biomedical researchers with a framework to better understand the reproducibility challenges in the area. Newly introduced interactive exercises and updated case studies help students understand the fundamental concepts involved in the area.

**Key Features:** Includes four new chapters and updates across the book, covering recent developments of issues affecting reproducibility in biomedical research; Covers reproducibility of results from machine learning AI algorithms; Presents new case studies to illustrate challenges in related fields; Includes a companion website with interactive exercises and summary tables.

**Targeting Signaling Pathways in Solid Tumors Part A. 1st Edition, Volume 385.**

*Edited by S. Mukherjee, K. Chatterjee.*  
2024, pp 277, EUR 154.07, ISBN: 9780443235474.  
Academic Press, Elsevier, Cambridge, MA, USA.

*Targeting Signaling Pathways in Solid Tumors, Part A, Volume 385 in the International Review of Cell and Molecular Biology* series, highlights new advances in the field, with this new volume presenting interesting chapters on topics such as Drugging the Undruggable: Advances in Targeting KRAS Signaling in Solid Tumors, Emerging Trends in Gastrointestinal Cancers: Targeting Developmental Pathways in their Carcinogenesis and Tumor Progression, Importance of targeting various cell signaling pathways in solid cancers, Targeting signaling pathways in cancer stem cells: a potential approach for developing novel anticancer therapeutics, Factors affecting heterogeneity in breast cancer microenvironment: A narrative review, and much more.

Additional sections cover Exploring TLR Signaling Pathways as Promising Targets in Cervical Cancer: The Road Less Travelled.