

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.

Human Biochemistry. 1st Edition.

Edited by G. Litwack.

2017, pp 778, Eur 124.34, ISBN: 978-0-1238-3864-3.

Academic Press, Elsevier, Cambridge, MA, USA.

Human Biochemistry includes clinical case studies and applications that are useful to medical, dentistry and pharmacy students. It enables users to practice for future careers as both clinicians and researchers. The book also provides extensive online support for students to assist with further understanding and comprehension of advanced concepts, including sample questions that will help them prepare for medical exams. In addition, instructor's ancillaries include PowerPoint presentations and testbanks.

Key Features:

- Winner of a 2018 Most Promising New Textbook (College) Award (Texty) from the Textbook and Academic Authors Association;
- Offers immediate application of biochemical principles into clinical terms in an updated way;
- Contains coverage of the most current research in medical biochemistry;
- Presents the first solution designed to reflect the needs of both research oriented and clinically oriented medical students.

Biology and Engineering of Stem Cell Niches. 1st Edition.

Edited by A. Vishwakarma, J. Karp.

2017, pp 642, Eur 114.48, ISBN: 978-0-1280-2734-9.

Academic Press, Elsevier, Cambridge, MA, USA.

Biology and Engineering of Stem Cell Niches covers a wide spectrum of research and current knowledge on embryonic and adult stem cell niches, focusing on the understanding of stem cell niche molecules and signaling mechanisms, including cell-cell/cell-matrix interactions. The book comprehensively reviews factors regulating stem cell behavior and the corresponding approaches for understanding the subsequent effect of providing the proper matrix molecules, mechanical cues, and/or chemical cues. It encompasses a variety of tools and techniques for developing biomaterials-based methods to model synthetic stem cell niches in vivo, or to enhance and direct stem cell fate in vitro.

Key Features:

- Includes the importance of Cell-Cell and Cell Matrix Interactions in each specific tissue and system;
- Authored and edited by authorities in this emerging and multidisciplinary field;
- Includes valuable links to 5-10 minute YouTube© author videos that describe main points.

MicroRNA and Cancer. Methods and Protocols.

Edited by W. Wu.

2018, pp 222, Eur 145.59, ISBN: 978-1-4939-7433-7.

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

This volume details basic principles of experimental and computational methods for the study of microRNAs in cancer research and, therefore, provides a firm grounding for those who wish to develop further applications. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

Authoritative and cutting-edge, *MicroRNA and Cancer: Methods and Protocols, Second Edition* aims to ensure successful results in the further study of this vital field.

Cancer Stem Cells. Methods and Protocols.

Edited by G. Papaccio, V. Desiderio.

2018, pp 223, Eur. 145.59, ISBN: 978-1-4939-7400-9.

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

This detailed volume gathers a comprehensive collection of methods, protocols, and procedures used for the identification, characterization, and selection of cancer stem cells. These include surface marker expression, side population, spheres formation, ALDH activity, and numerous others. Written for the highly successful *Methods in Molecular Biology series*, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and expert tips and troubleshooting advice to avoid potential pitfalls.

Comprehensive and practical, *Cancer Stem Cells: Methods and Protocols* provides researchers with the techniques they will need in order to pursue vital research into this complex field of study.

Advances in Cell and Molecular Diagnostics. 1st Edition.

Edited by P. Raghavendra, T. Pullaiah.

2018, pp 298, Eur 124.34, ISBN: 978-0-1281-3679-9.

Academic Press, Elsevier, Cambridge, MA, USA.

Advances in Cell and Molecular Diagnostics brings the scientific advances in the translation and validation of cellular and molecular discoveries in medicine into the clinical

diagnostic setting. It enumerates the description and application of technological advances in the field of cellular and molecular diagnostic medicine, providing an overview of specialized fields, such as biomarker, genetic marker, screening, DNA-profiling, NGS, cytogenetics, transcriptome, cancer biomarkers, prostate specific antigen, and biomarker toxicologies. In addition, it presents novel discoveries and clinical pathologic correlations, including studies in oncology, infectious diseases, inherited diseases, predisposition to disease, and the description or polymorphisms linked to disease states.

This book is a valuable resource for oncologists, practitioners and several members of the biomedical field who are interested in understanding how to apply cutting-edge technologies into diagnostics and healthcare.

Key Features:

- Encompasses the current scientific advances in the translation and validation of cellular and molecular discoveries into the clinical diagnostic setting;
- Explains the application of cellular and molecular diagnostics methodologies in clinical trials;
- Focuses on translating preclinical tests to the bedside in order to help readers apply the most recent technologies to healthcare.

Mims' Medical Microbiology and Immunology. 6th Edition.

Edited by R. Goering, H.M. Dockrell, M. Zuckerman, P.L. Chiodini.

2018, pp 568, Eur 59.39, ISBN: 978-0-7020-7154-6.
Academic Press, Elsevier, Cambridge, MA, USA.

Learn all the microbiology and basic immunology concepts you need to know for your courses and exams. Now fully revised and updated, Mims' clinically relevant, systems-based approach and abundant colour illustrations make this complex subject easy to understand and remember.

Early Phase Cancer Immunotherapy.

Edited by S.P. Patel, R. Kurzrock.

2018, pp 331, Eur 176.79, ISBN 978-3-319-63756-3.
Springer International Publishing, Cham, Switzerland.

This volume, a state-of-the-art review of early phase clinical trials for cancer immunotherapy, discusses biomarker selection, combinatorial strategies and their safety or toxicity, determination of Phase 2 dosing, endpoints in the setting of radiographic pseudoprogression, histology selection, and novel immunotherapeutics as they relate to early phase cancer immunotherapy.

D-type Cyclins and Cancer.

Edited by P.W. Hinds, N.E. Brown.

2018, pp 152, Eur 155.99, ISBN: 978-3-319-64449-3.
Springer International Publishing, Cham, Switzerland.

This volume provides an integrated account of our current understanding of the functions of D-type cyclins during development and tumorigenesis, with special emphasis on the kinase-independent functions of these proteins. The volume will provide a thorough review of the latest discoveries on the new functions and interacting partners of mammalian cyclin Ds crucial to explain their oncogenic and differentiation properties in different cellular contexts. The volume begins with a historical perspective of how D-type cyclins were first discovered and eventually cloned from cancer tissues, followed by an account on the canonical functions of cyclin Ds during the G1-S transition of the cell cycle. Several chapters will be devoted to review the functions of D-type cyclins as transcriptional regulators and the mechanisms through which these novel functions could impact the tumorigenic process. Also discussed is emerging evidence that points to a role of D-type cyclins, particularly cyclin D1, as a cytoplasmic regulator of various cellular functions. This property, in human cells at least, is traceable to certain splice isoforms with novel oncogenic implications. Finally, a chapter is devoted to recent efforts to revise the canonical view of the "retinoblastoma pathway" to incorporate new evidence that suggests that cyclin D1's role in G1 is to singly-phosphorylate the retinoblastoma protein (pRb) for discrimination of target protein interactions. This work represents a significant departure from the view of cyclin D1 as a negative regulator of pRb and may have critical implications for understanding the function of antineoplastic agents that target the cyclin D1-associated kinases.

Tumor Immune Microenvironment in Cancer Progression and Cancer Therapy.

Edited by P. Kalinski.

2017, pp 264, Eur 176.79, ISBN: 978-3-319-67575-6.
Springer International Publishing, Cham, Switzerland.

The tumor microenvironment has become a very important and hot topic in cancer research within the past few years. The tumor microenvironment is defined as the normal cells, molecules, and blood vessels that surround and feed a tumor cell. As many scientists have realized, studying the tumor microenvironment has become critical to moving the field forward, since there are many players in a tumor's localized and surrounding area, which can significantly change cancer cell behavior. There is a dual relationship wherein the tumor can change its microenvironment and the microenvironment can affect how a tumor grows and spreads. *Tumor Microenvironment in Cancer Progression and Cancer Therapy* aims to shed light on the mechanisms, factors, and mediators that are involved in the cancer cell environment. Recent studies have demonstrated that in addition to promoting tumor progression and protecting tumor cells from the spontaneous immune-mediated rejection and different forms of cancer therapeutics, tumor microenvironment can also be a target and mediator of both standard and newly-emerging forms of cancer therapeutics. Thus, the dual role of the tumor microenvironment is the integral focus of the volume. The volume highlights the bi-

directional interactions between tumor cells and non-malignant tumor component during tumor progression and treatment. It also focuses on the three groups of the reactive tumor component: stromal cells, blood vessels and the infiltrating immune cells. These three groups are discussed under the lens of their role in promoting tumor growth, shielding the tumor from rejection and from standard forms of cancer therapies. They are emerging as targets and mediators of standard and new forms of potential therapy.

Chromatin Proteins and Transcription Factors as Therapeutic Targets, Volume 107. 1st Edition.

Edited by R. Donev.

2017, pp 386, Eur 129.32, ISBN: 978-0-1281-2390-4.

Academic Press, Elsevier, Cambridge, MA, USA.

Chromatin Proteins and Transcription Factors as Therapeutic Targets, the latest volume in the *Advances in Protein Chemistry and Structural Biology* series is an essential resource for protein chemists. Each volume brings forth new information about protocols and analysis of proteins, with each thematically organized volume guest edited by leading experts in a broad range of protein-related topics.

Key Features:

- Provides cutting-edge developments in the field;
- Contains chapters written by authorities;
- Targeted to a wide audience of researchers, specialists, and students.

Enzymology at the Membrane Interface: Intramembrane Proteases, Volume 584. 1st Edition.

Edited by M. Gelb.

2017, pp 494, Eur 150.52, ISBN: 978-0-1281-2213-6.

Academic Press, Elsevier, Cambridge, MA, USA.

Enzymology at the Membrane Interface: Intramembrane Proteases, Volume 584, the latest release in the *Methods in Enzymology* series, covers a subset of enzymes that work in the environment of the biological cell membrane. This field, called interfacial enzymology, involves a special series of experimental approaches for the isolation and study of these enzymes.

Key Features:

- Covers a subset of enzymes that work in the environment of the biological cell membrane;
- Offers a series of experimental approaches for the isolation and study of enzymes.

Tumor Organoids.

Edited by S. Soker, A. Skardal.

2018, pp 213, Eur 166.39, ISBN: 978-3-319-60509-8.

Humana Press, Springer International Publishing, Cham, Switzerland.

Cancer cell biology research in general, and anti-cancer drug development specifically, still relies on standard cell culture techniques that place the cells in an unnatural environment. As a consequence, growing tumor cells in plastic dishes places a selective pressure that substantially alters their original molecular and phenotypic properties. The emerging field of regenerative medicine has developed bioengineered tissue platforms that can better mimic the structure and cellular heterogeneity of in vivo tissue, and are suitable for tumor bioengineering research. Microengineering technologies have resulted in advanced methods for creating and culturing 3-D human tissue. By encapsulating the respective cell type or combining several cell types to form tissues, these model organs can be viable for longer periods of time and are cultured to develop functional properties similar to native tissues. This approach recapitulates the dynamic role of cell–cell, cell–ECM, and mechanical interactions inside the tumor. Further incorporation of cells representative of the tumor stroma, such as endothelial cells (EC) and tumor fibroblasts, can mimic the in vivo tumor microenvironment. Collectively, bioengineered tumors create an important resource for the in vitro study of tumor growth in 3D including tumor biomechanics and the effects of anti-cancer drugs on 3D tumor tissue. These technologies have the potential to overcome current limitations to genetic and histological tumor classification and development of personalized therapies.

Chemical Glycobiology: Monitoring Glycans and Their Interactions, Volume 598. 1st Edition.

Edited by B. Imperiali.

2018, pp 420, Eur 127.94, ISBN: 978-0-1281-4419-0.

Academic Press, Elsevier, Cambridge, MA, USA.

Chemical Glycobiology, Part B, Volume 598, the latest release in the *Methods in Enzymology* series, continues the legacy of this premier serial with quality chapters authored by leaders in the field. This volume is the second release on chemical glycobiology.

Key Features:

- Presents an updated volume in this regular series;
- Covers research on chemical glycobiology.

Peptidomics of Cancer-Derived Enzyme Products, Volume 42. 1st Edition.

Edited by T. Hu, F. Tamanoi.

2017, pp 188, Eur 141.36, ISBN: 978-0-1281-2638-7.

Academic Press, Elsevier, Cambridge, MA, USA.

Peptidomics of Cancer-Derived Enzyme Products, Volume 42, the latest in *The Enzymes* series, is ideal for researchers in biochemistry, molecular and cell biology, pharmacology, and cancer, with this volume featuring high-caliber, thematic articles on the topic of peptidomics of cancer-derived enzyme products. Specific chapters cover Circulating peptidome and tumor-resident proteolysis, Colon tumor secretome peptidome, Chemoenzymatic method for glycomics, Human plasma peptidome for pancreatic cancer, Lipoproteomics and quantitative proteomics, Salivaomics:

Protein markers/extracellular RNA/DNA in saliva, and Enzyme-responsive vectors for cancer therapy.

Key Features:

- Presents some of the most recent advances in the identification and function of enzymes changes in cancer;
- Features authoritative expertise from recognized contributors to the field.

Matrix Metalloproteinases and Tissue Remodeling in Health and Disease: Target Tissues and Therapy, Volume 148. 1st Edition.

Edited by R. Khalil.

2017, pp 446, Eur 129.32, ISBN: 978-0-1281-2776-6.

Academic Press, Elsevier, Cambridge, MA, USA.

Matrix Metalloproteinases and Tissue Remodeling in Health and Disease: Target Tissues and Therapy, Volume 148, the latest volume in the *Progress in Molecular Biology and Translational Science* series covers a variety of timely topics, with chapters focusing on The Role of Matrix Metalloproteinases in Development, Repair, and Destruction of the Lungs, Matrix Metalloproteinases in Kidney Disease: Role in Pathogenesis and Potential as a Therapeutic Target, Regulation of Matrix Metalloproteinase in the Pathogenesis of Diabetic Retinopathy, Matrix Metalloproteinases in Normal Pregnancy and Preeclampsia, and Matrix Metalloproteinases, Neural Extracellular Matrix, and Central Nervous System Pathology.

This volume is the second part of a thematic on matrix metalloproteinases and tissue remodeling in health and disease. It focuses on the role of MMPs in other systems, target tissues, and pathological disorders and the potential benefits of MMP inhibitors in various disorders.

Key Features:

- Serves as the second part of a thematic on matrix metalloproteinases and tissue remodeling in health and disease;
- Focuses on cardiovascular remodeling;
- Contains contributions from leading authorities on the topics;
- Publishes cutting-edge reviews in molecular biology.

Skin Tissue Models. 1st Edition.

Edited by A. Marques, R. Reis, R. Pirraco, M. Cerqueira.

2017, pp 472, Eur 103.61, ISBN: 978-0-1281-0545-0.

Academic Press, Elsevier, Cambridge, MA, USA.

Skin Tissue Models provides a translational link for biomedical researchers on the interdisciplinary approaches to skin regeneration. As the skin is the largest organ in the body, engineered substitutes have critical medical application to patients with disease and injury – from burn wounds and surgical scars, to vitiligo, psoriasis and even plastic surgery. This volume offers readers preliminary description of the normal structure and function of mammalian skin, exposure to clinical problems and disease, coverage of potential therapeutic molecules and testing, skin substitutes, models as study platforms of skin biology and emerging technologies.

The editors have created a table of contents which frames the relevance of skin tissue models for researchers as platforms to study skin biology and therapeutic approaches for different skin diseases, for clinicians as tissue substitutes, and for cosmetic and pharmaceutical industries as alternative test substrates that can replace animal models.

Key Features:

- Offers descriptions of the normal structure/function of mammalian skin, exposure to clinical problems, and more;
- Presents coverage of skin diseases (cancer, genodermatoses, vitiligo and psoriasis) that extends to clinical requirements and skin diseases in vitro models;
- Addresses legal requirements and ethical concerns in drugs and cosmetics in vitro testing;
- Edited and authored by internationally renowned group of researchers, presenting the broadest coverage possible.

Cancer Epidemiology and Prevention.

Edited by M. Thun, M.S. Linet, J.R. Cerhan, C.A. Haiman, D. Schottenfeld.

2017, pp 1328, Eur 224.79, ISBN: 978-0-1902-3866-7.

Oxford University Press, Incorporated, Oxford, UK.

Since its initial publication in 1982, *Cancer Epidemiology and Prevention* has served as the premier reference work for both students and professionals working to understand the causes and prevention of cancer in humans. Now revised for the first time in more than a decade, this fourth edition provides an updated and comprehensive summary of the global patterns of cancer incidence and mortality, current understanding of the major causal determinants, and a rationale for preventive interventions. In this edition, special attention has been paid to molecular epidemiologic approaches that address the wider role of genetic predisposition and gene-environment interactions in cancer etiology and pathogenesis.