F. Al-Mulla, Kuwait University, Safat, Kuwait (Ed.)

Formalin-Fixed Paraffin-Embedded Tissues

Methods and Protocols

Presenting an area of research that intersects with and integrates diverse disciplines, including genomics, epigenetics, proteomics, and cellular biology, among others, Formalin-Fixed Paraffin-Embedded Tissues: Methods and Protocols collects contributions from expert researchers in order to provide practical guidelines to this complex study. Compiled in order to provide researchers with up-to-date methodological information pertaining to the utilization of genomic, transcriptomic, and proteomic data in diagnosis, prognosis, and tailored therapy, the ultimate aim of this volume is to decipher diseases at a molecular level. Divided into multiple convenient chapters, this detailed book covers various techniques to construct and utilize tissue arrays, it also provides detailed protocols in immunohistochemistry, immunofluorescence, fluorescent and chromogenic in situ hybridization, and ultimately introduces protocols for FFPET microdissection and nucleic acids extraction for their utilization in advanced techniques such as microarray CGH, DNA methylation and pyrosequencing.

Features
► Includes well-established and tested methods and protocols ► Provides step-by-step detail essential for reproducible results ► Contains well-organized themes and key implementation advice from the experts

Fields of interest
Molecular Medicine; Pathology

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2011. 295 p. 57 illus., 1 in color. (Methods in Molecular Biology, Volume 724) Hardcover

► **$139.00**
ISBN 978-1-61779-054-6

M. Aschner, Vanderbilt University Medical Center, Nashville, TN, USA; **C. Suñol**, Institut d'Investigacions Biomèdiques de Barcelona, Spain; **A. Bal-Price**, Joint Research Centre, Ispra, Italy (Eds.)

Cell Culture Techniques

Societal, ethical, and cost-related issues, not to mention the need for sound scientific methods, have led to new and refined methods for the evaluation of health risks associated with neurotoxic compounds, relevant and predictive of exposure, relatively inexpensive, and ideally amenable to high throughput analysis and a reduction in animal use. Cell Culture Techniques presents thorough traditional chapters, such as those on various cell culture methods that have evolved over the years, as well as innovative approaches to neurotoxicologic testing. Accordingly, this detailed volume describes how stem cells, computational biology, and other novel powerful methods can now be applied to address the challenges of neurotoxic testing.

Features
► Facilitates the study of adverse changes in the developing and mature brain alike ► Features classic as well as innovative new approaches to neurotoxicologic testing ► Aids in the reduction of the necessity of animal testing

From the contents
Guidance on Good Cell Culture Practice (GCCP).- Induced Pluripotent Stem Cells (iPSCs): An Emerging Model System for the Study of Human Neurotoxicology.- Neural Stem Cells.- Primary Cultures for Neurotoxicity Testing.- Preparation and Use of Serum-Free Aggregating Brain Cell Cultures for Routine Neurotoxicity Screening.- Cell Culture to Investigate Neurotoxicity and Neurodegeneration Utilizing Caenorhabditis elegans.- Modeling the Blood-Brain Barrier.- In vitro Models of the Blood-Cerebrospinal Fluid Barrier and Their Use in Neurotoxicological Research.- Introducing Cloned Genes into Cultured Neurons Providing Novel In vitro Models for Neuropathology and Neurotoxicity Studies.

Fields of interest
Neurosciences; Neurochemistry

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2011. 500 p. 84 illus. (Neuromethods, Volume 56) Hardcover

► **$159.00**
ISBN 978-1-61779-076-8

L. J. Campbell, St. Vincent's Hospital Melbourne, Fitzroy, VIC, Australia (Ed.)

Cancer Cytogenetics

Methods and Protocols

Cytogenetic studies of malignancy have become an essential tool in the clinical management of cancer patients. Cancer Cytogenetics: Methods and Protocols presents eminently practical key cytogenetic and FISH techniques for every stage of diagnostic service. Experts in the field describe detailed cytogenetic analysis methods, fluorescence in situ hybridization and array methods currently being applied to investigate and diagnose different varieties of cancer. Written in the highly successful Methods in Molecular Biology™ series format, chapters contain introductions to their respective topics, lists of the necessary materials and reagents, and step-by-step, readily reproducible laboratory protocols.

Features
► Includes cutting-edge methods and protocols ► Provides step-by-step detail essential for reproducible results ► Contains key notes and implementation advice from the experts

From the contents
Evolution of Cytogenetic Methods in the Study of Cancer.- Fluorescence In situ Hybridization Methods and Troubleshooting Applied to Fixed Cell Suspensions.- Chronic Myeloid Leukemia: Cytogenetic Methods and Applications for Diagnosis and Treatment.- Cytogenetic Analysis in Acute Myeloid Leukaemia.- Cytogenetics in Myelodysplastic Syndromes.- Cytogenetics of Myeloproliferative Disorders.- Acute Lymphoblastic Leukaemia.- Cytogenetics Methods in Chronic Lymphocytic Leukaemia (CLL).- Genetic Abnormalities in Non-Hodgkin's Lymphoma as Revealed by Conventional and Molecular Cytogenetics Methods of Analysis.

Fields of interest
Cancer Research; Pathology

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2nd ed. 2011. 250 p. 43 illus., 9 in color. (Methods in Molecular Biology, Volume 730) Hardcover

► **$119.00**
ISBN 978-1-61779-073-7

W. C. Cho, Queen Elizabeth Hospital, Hong Kong, China (Ed.)

Evidence-based Anticancer Herbal Medicine

Cancer is one of the leading killers in the world and the incidence is increasing, but most cancer patients and cancer survivors suffer much from the disease and its conventional treatments' side effects. In the past, clinical data showed that some complementary and alternative medicine (CAM) possessed anticancer abilities, but some clinicians and scientists have queried about the scientific validity of CAM due to the lack of scientific evidence. There is great demand in the knowledge gap to explore the scientific and evidence-based knowledge of CAM in the anticancer field. With this aim, a book series is needed to structurally deliver the knowledge to readers.Recently there have been encouraging results from both laboratory experiments and clinical trials demonstrating the anticancer effects of herbal medicine. There is considerable interest among oncologists and cancer researchers to find anticancer agents in herbal medicine.

Features
► Specialised book on the up-to-date scientific evidence for anticancer herbal medicine ► Currently there is considerable interest among oncologists to find anticancer agents in herbal medicine ► Provides an overview of the anticancer herbal medicines and remedies

Fields of interest
Cancer Research; Biomedicine general; Medicine/Public Health, general

Target groups
Research

Due March 2011

2011. XII, 520 p. (Evidence-based Anticancer Complementary and Alternative Medicine) Hardcover

► **$209.00**
ISBN 978-94-007-0525-8

I. A. Cree, Queen Alexandra Hospital, Portsmouth, UK (Ed.)

Cancer Cell Culture

Methods and Protocols

With many recent advances, cancer cell culture research is more important than ever before. This timely edition of Cancer Cell Culture: Methods and Protocols covers the basic concepts of cancer cell biology and culture while expanding upon the recent shift in cell culture methods from the generation of new cell lines to the use of primary cells. There are methods to characterize and authenticate cell lines, to isolate and develop specific types of cancer cells, and to develop new cell line models. Functional assays are provided for the evaluation of clonogenicity, cell proliferation, apoptosis, adhesion, migration, invasion, senescence, angiogenesis, and cell cycle parameters.

Features
► Includes cutting-edge methods and protocols ► Provides step-by-step detail essential for reproducible results ► Contains key notes and implementation advice from the experts

From the contents
Cancer Biology.- Principles of Cancer Cell Culture.- Storage of Cell Lines.- Characterization and Authentication of Cancer Cell Lines: An Overview.- Online Verification of Human Cell Line Identity by STR DNA Typing.- Cytogenetic Analysis of Cancer Cell Lines.- Cell Culture Contamination.- Detecting Mycoplasma Contamination in Cell Cultures by Polymerase Chain Reaction.- Elimination of Mycoplasma from Infected Cell Lines Using Antibiotics.- Quality Assurance and Good Laboratory Practice.- Generation of Lung Cancer Cell Line Variants by Drug Selection or Cloning.- Isolation and Culture of Colon Cancer Cells and Cell Lines.- Isolation and Culture of Melanoma and Naevus Cells and Cell Lines.- Isolation and Culture of Squamous Cell Carcinomalines.- Isolation and Culture of Ovarian Cancer Cells and Cell Lines.

Fields of interest
Cancer Research; Cell Culture

Target groups
Professional/practitioner

Discount group
P

Due April 2011

2nd ed. 2011. 485 p. 72 illus. (Methods in Molecular Biology, Volume 731) Hardcover

► **$139.00**
ISBN 978-1-61779-079-9

Current Topics in Microbiology and Immunology

Series editors: **R. W. Compans**, **M. D. Cooper**, **H. Koprowski**, **F. Melchers**, **M. B. Oldstone**, **S. Olsnes**, **P. K. Vogt**, **T. Honjo**, **Y. Y. Gleba**, **B. Malissen**, **K. Aktories**

Volume 348

L. T. Vassilev, **D. Fry**, Hoffmann-La Roche Inc., Nutley, NJ, USA (Eds.)

Small-Molecule Inhibitors of Protein-Protein Interactions

In this volume, the editors have collected the knowledgeable insights of a number of leaders in this field - researchers who have achieved success in addressing the difficult problem of inhibiting protein-protein interactions. These researchers describe their unique approaches, and share experiences, results, thoughts, and opinions. The content of the articles is rich, and in terms of scope ranges from generalized approaches to specific case studies. There are various focal points, including methodologies and the molecules themselves. Ultimately, there are numerous lessons to be taken away from this collection, and the editors hope that this snapshot of the current state of the art in developing protein-protein inhibitors not only pays tribute to the past successes, but also generates excitement about the future potential of this field.

Features
► In this volume, the editors have collected the knowledgeable insights of a number of leaders in this field - researchers who have achieved success in addressing the difficult problem of inhibiting protein-protein interactions ► The content of the articles is rich, and in terms of scope ranges from generalized approaches to specific case studies ► There are various focal points, including methodologies and the molecules themselves

Field of interest
Biomedicine general

Target groups
Research

Discount group
P

Due January 2011

2011. X, 180 p. 63 illus., 20 in color. Hardcover

► **$189.00**
ISBN 978-3-642-17082-9

S. H. Francis, Vanderbilt University, USA; **M. Conti**, University of California San Francisco (UCSF), San Francisco, CA, USA; **M. D. Houslay**, Glasgow University, UK (Eds.)

Phosphodiesterases as Drug Targets

Cyclic nucleotide phosphodiesterases (PDEs) are promising targets for pharmacological intervention. Multiple PDE genes, isoform diversity, selective expression and compartmentation of the isoforms, and an array of conformations of PDE proteins are properties that challenge development of drugs that selectively target this class of enzymes. Novel characteristics of PDEs are viewed as unique opportunities to increase specificity and selectivity when designing novel compounds for certain therapeutic indications. This chapter provides a summary of the major concepts related to the design and use of PDE inhibitors.

Features
► Provides a summary of the major concepts related to the design and use of PDE inhibitors ► Describes exciting ideas and developments that are currently emerging in this dynamic and important field ► Written by leading authorities in the field

From the contents
Phosphodiesterase inhibitors: History of pharmacology; PDE inhibitors: factors that influence potency, selectivity and action; A fission yeast-based platform for phosphodiesterase inhibitor high throughput screening and analyses of phosphodiesterase activity; The pharmacokinetics of PDE inhibitors and the impact of this on their efficacy and the therapeutic window; Structural insight into the substrate specificity of phosphodiesterases; The GAF-tandem domain of phosphodiesterase 5 as a potential drug target.

Fields of interest
Pharmacology/Toxicology; Medicinal Chemistry; Protein Structure

Target groups
Research

Discount group
P

Due April 2011

2011. 450 p. (Handbook of Experimental Pharmacology, Volume 204) Hardcover

► **approx. $459.00**
ISBN 978-3-642-17968-6
Prepublication price, valid until September 15, 2011
► **approx. $389.00**

M. Hayat, Distinguished Professor and Research Professor, Department of Biological Sciences, Kean University, Union, NJ (Ed.)

Tumors of the Central Nervous System, Volume 2

Gliomas: Glioblastoma (Part 2)

Advantages and limitations of biomarkers in gliomagenesis are described. Molecular subtypes of gliomas are detailed. The role played by TP53 gene mutation in the deadliest brain tumor, glioblastoma multiforme, is pointed out. The role of mutations of IDH1 and IDH2, and isocitrate dehydrogenases in malignant gliomas are presented. Metabolic differences in different regions of the glioma tumor are clarified. Various types of imaging modalities, including PET and SPECT, to diagnose gliomas in general and glioblastoma in particular in patients are explained in detail. Both low-grade and high-grade gliomas are discussed. Conventional as well as fluorescent-guided resection techniques for high-grade, recurrent malignant gliomas are detailed. Impact of resection extent on outcomes in patients with high-grade gliomas is clarified. The advantage of the use of intraoperative low-field MRI in glioma surgery is explained.

Features
► Targeted therapy determined by molecular genetics is emphasized ► Several imaging techniques for diagnosis and treatment assessment are detailed ► Present and future therapeutic drugs against malignant gliomas are describe ► The anti-tumor action of cyclosporine A and functionally-related drugs is explained ► Brain tumor angiogenesis and glioma grading are described.

Fields of interest
Cancer Research; Neuroradiology; Neurosurgery

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2011. XX, 980 p. Hardcover

► **$279.00**
ISBN 978-94-007-0617-0

K. K. Jain, Jain PharmaBiotech, Basel, Switzerland

The Handbook of Neuroprotection

Neuroprotection has been placed on a firm scientific basis during the past decade due to an improved understanding of the molecular basis of neurological diseases and the knowledge that treatment of neurological disorders should not be merely symptomatic but preventative toward the progression of the underlying disease, as well as regenerative. The Handbook of Neuroprotection serves as a comprehensive review of neuroprotection based on knowledge of the molecular basis of neurological disorders. Neuroprotective effects of older, established drugs, as well as new drugs in development, are well documented in this detailed volume, featuring the most cutting-edge and innovative methods currently in use. In-depth and authoritative, The Handbook of Neuroprotection features a compendium of vital knowledge aimed at providing researchers with an essential reference for this key neurological area of study.

Features
► Describes the neuroprotective effects of established and newer drugs which have undergone clinical trials ► Provides comprehensive coverage of the topic through the prism of multiple neurological disorders ► Serves as a key reference volume for neurologists and pharmacologists

Contents
Introduction.- Neuroprotective Agents.- Neuroprotection in Cerebrovascular Disease.- Neuroprotection in Traumatic Brain Injury.- Neuroprotection in Spinal Cord Injury.- Neuroprotection in Neurodegenerative Disorders.- Neuroprotection in Parkinson's Disease.- Neuroprotection in Alzheimer's Disease.- Neuroprotection in Huntington's Disease.- Neuroprotection in Amyotrophic Lateral Sclerosis.- Neuroprotection in Miscellaneous Neurological Disorders.- Neuroprotection of the Optic Nerve and the Retina.- Neuroprotection during Anesthesia and Surgery.- Future Prospects of Neuroprotective Therapies.

Fields of interest
Neurosciences; Neurology

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2011. 350 p. 9 illus. Hardcover

► **$209.00**
ISBN 978-1-61779-048-5

S. C. Khojasteh, **H. Wong**, **C. E. Hop**, Genentech, Inc., San Francisco, CA, USA

Drug Metabolism and Pharmacokinetics Quick Guide

Drug Metabolism and Pharmacokinetics Quick Guide covers a number of aspects of drug assessment at drug discovery and development stages, topics such as pharmacokinetics, absorption, metabolism, enzyme kinetics, drug transporters, drug interactions, drug-like properties, assays and in silico calculations. It covers key concepts, with useful tables on physiological parameters (eg. blood flow to organs in x-species, expression and localization of enzymes and transporters), chemical structure, nomenclature, and moieties leading to bioactivation (with examples). Overall it includes a number of key topics useful at the drug discovery stage, which would serve as a quick reference with several examples from the literature to illustrate the concept.

Features
► Covers a number of aspects of drug assessment at drug discovery and development stagesIncludes topics in pharmacokinetics, absorption, metabolism, enzyme kinetics, drug transporters, drug interactions, drug-like properties, assays and in silico calculations ► Covers key concepts, with useful tables on physiological parameters, chemical structure, nomenclature, and moieties leading to bioactivation

Contents
Pharmacokinetics.- Drug Metabolizing Enzymes.- Oral Absorption.- Transporters.- Metabolism-Based Drug Interactions.- Biotransformation and Bioactivation.- Prediction of Human Pharmacokinetics.- Advances in Bioanalysis as it Relates to ADME.- ADME Properties and Their Dependence on Physicochemical Properties.- In Silico ADME Tools.- Approved Drugs.- Chemical Nomenclature.

Fields of interest
Pharmacology/Toxicology; Pharmacy; Biochemistry, general

Target groups
Research

Discount group
P

Due April 2011

2011. VII, 163 p. 57 illus. Softcover

► **approx. $49.00**
ISBN 978-1-4419-5628-6

G. Klebe, University of Marburg

Drug Design

Methodology, Concepts, and Mode-of-Action

Unique work on structure-based drug design, covering multiple aspects of drug discovery and development. Fully colored, many images, computer animations of 3D structures (these only in electronic form). Makes the spatial aspects of interacting molecules clear to the reader, covers multiple applications and methods in drug design. Structures by mode of action, no therapeutic areas. Of high relevance for academia and industrial research. Focus on gene technology in drug design, omics-technologies computational methods experimental techniques of structure determination multiple examples on mode of action of current drugs, ADME-tox properties in drug development, QSAR methods, combinatorial chemistry, biologicals, ribosome, targeting protein-protein interfaces.

Fields of interest
Biomedicine general; Chemistry/Food Science, general; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups
Research

Discount group
P

SPRINGER REFERENCE

Due September 2011

Original German Edition published by Spektrum Akademischer Verlag, 2009

2011. XXX, 720 p. 400 illus. in color. Hardcover

► **approx. $549.00**
ISBN 978-3-642-17906-8

2011. XXX, 720 p. 400 illus. in color. eReference

► **approx. $549.00**
ISBN 978-3-642-17907-5

2011. XXX, 720 p. 400 illus. in color. Print + eReference

► **approx. $689.00**
ISBN 978-3-642-17908-2

Y. M. Kwon, Department of Poultry Science, University of Arkansas, Fayetteville, AR, USA; **S. C. Ricke**, Department of Food Science, University of Arkansas, Fayetteville, AR, USA (Eds.)

High-Throughput Next Generation Sequencing

Methods and Applications

Due to their novel concepts and extraordinary high-throughput sequencing capacity, the "next generation sequencing" methods allow scientists to grasp system-wide landscapes of the complex molecular events taking place in various biological systems, including microorganisms and microbial communities. These methods are now being recognized as essential tools for a more comprehensive and deeper understanding of the mechanisms underlying many biological processes. In High-Throughput Next Generation Sequencing: Methods and Applications, experts in the field explore the most recent advances in the applications of next generation sequencing technologies with an emphasis on microorganisms and their communities; however, the methods described in this book will also offer general applications relevant to the study of any living organisms.

Features
► Provides techniques necessary to grasp system-wide landscapes of complex molecular events ► Supplies practical chapters with easy to follow instructions ► Features key tips and implementation advice from the experts

Fields of interest
Human Genetics; Microbial Genetics and Genomics; Gene Expression

Target groups
Professional/practitioner

Discount group
P

Due April 2011

2011. 260 p. 40 illus., 5 in color. (Methods in Molecular Biology, Volume 733) Hardcover

► **$119.00**
ISBN 978-1-61779-088-1

C. Lu, Department of Plant Sciences and Plant Pathology, Montana State University, Bozeman, MT, USA; **J. Browse**, **J. G. Wallis**, Institute of Biological Chemistry, Washington State University, Pullman, WA, USA (Eds.)

cDNA Libraries

Methods and Applications

The numerous vital applications of complementary DNA (cDNA) technology have changed dramatically as the technology has advanced over recent years. In cDNA Libraries: Methods and Protocols, expert researchers provide current techniques that reflect the latest advances in the construction and application of cDNA libraries. The first half of the volume covers improved approaches to some of the most basic elements of creating cDNA libraries, while the second half casts a much wider net and includes visionary applications of cDNA technology which were either unforeseen or technically impractical until recently. 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 key tips on troubleshooting and avoiding known pitfalls.

Features
► Captures the current state of this ever-developing and powerful technology ► Features practical methodologies, ready for the lab ► Contains vital implementation advice from experts in the field

Fields of interest
Human Genetics; Gene Expression

Target groups
Professional/practitioner

Discount group
P

Due March 2011

2011. 260 p. 47 illus., 2 in color. (Methods in Molecular Biology, Volume 729) Hardcover

► **$119.00**
ISBN 978-1-61779-064-5

M. M. Mueller, Hochschule Furtwangen University and Head of Research Group Tumor and Microenvironment German at the Cancer Research Center, Heidelberg, Germany; **N. Fusenig**, Professor emeritus University of Heidelberg, former division head at the German Cancer Research Center, Heidelberg, Germany (Eds.)

Tumor-Associated Fibroblasts and their Matrix

Tumor Stroma

During the last 20 years it has become increasingly clear that the tumor micro-environment, the tumor stroma with its cellular end extracellular components, plays an crucial role in regulating tumor growth and progression. This book on "Tumor-associated fibroblasts and their matrix" as part of the series on "Tumor-Microenvironment" is the first comprehensive discussion of these two main players of the tumor microenvironment. The best experts in this new area of tumor research and therapy review the role of these major components in the tumor stroma in the process of tumor development and progression. They discuss their interaction with other players such as blood vessels and immune cells, and show novel perspectives for tumor therapy. This compilation of excellent contributions of the best known experts in this important field in cancer research and therapy is a must for all scientists engaged in basic and clinical research. Increasing evidence of successful targeting of both cellular and matrix components in tumor therapy renders this book of particular interest for scientists engaged in pharmaceutical industry searching for new components for cancer therapy.

Features
► First comprehensive compilation of expert reviews on tumor stroma and its role in tumor biology important for basic and clinical cancer researchers ► Highlighting promising new targets for cancer therapy ► Novel textbook for teaching tumor biology to graduate students

Fields of interest
Cancer Research; Biomedicine general; Oncology

Target groups
Research

Discount group
P

Due March 2011

2011. XX, 580 p. (The Tumor Microenvironment, Volume 4) Hardcover

► **$239.00**
ISBN 978-94-007-0658-3

A. Petronis, Centre for Addiction and Mental Health, Toronto, ON, Canada; **J. Mill**, King's College London, UK (Eds.)

Brain, Behavior and Epigenetics

Biomedical research in the first decade of the 21st century has been marked by a rapidly growing interest in epigenetics. The reasons for this are numerous, but primarily it stems from the mounting realization that research programs focused solely on DNA sequence variation, despite their breadth and depth, are unlikely to address all fundamental aspects of human biology. Some questions are evident even to non-biologists. How does a single zygote develop into a complex multicellular organism composed of dozens of different tissues and hundreds of cell types, all genetically identical but performing very different functions? Why do monozygotic twins, despite their stunning external similarities, often exhibit significant differences in personality and predisposition to disease?

Features
► Art Petronis' and Jon Mill's research is dedicated to the understanding of the role of epigenetic risk factors in complex diseases ► Epigenetic processes can explain some of the epidemiological associations between environmental exposure and disease, particularly when the exposure occurs at a critical developmental stage ► Epigenetics, a cellular mechanism once considered to be stable after development, has now been found to be a dynamic process that occurs in fully differentiated, post-mitotic cells of central nervous system in response to environmental signals

Fields of interest
Human Genetics; Psychiatry

Target groups
Research

Discount group
P

Due May 2011

2011. X, 335 p. 21 illus., 10 in color. (Epigenetics and Human Health) Hardcover

► **approx. $209.00**
ISBN 978-3-642-17425-4

M. Ritsner, Professor of Psychiatry and Head of Cognitive & Psychobiology Research Laboratory, the Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel (Ed.)

Handbook of Schizophrenia Spectrum Disorders, Volume I

Conceptual Issues and Neurobiological Advances

From the contents
Foreword. Schizophrenia Spectrum Disorders: Insights from views across 100 years.- 1. The schizophrenia construct after 100 years of challenges.- 2. Diagnosis and classification of the schizophrenia spectrum disorders.- 3. Toward Multidimensional Continuum Model of functional psychoses for research purposes.- 4. Irving Gottesman and the schizophrenia spectrum.- 5. Schizotypy: Reflections on the bridge to schizophrenia and obstacles on the road ahead to etiology and pathogenesis.- 6. Autism spectrum disorders and schizophrenia.- 7. One hundred years of insanity: genomic, psychological, and evolutionary models of autism in relation to schizophrenia.- 8. Quantifying the dynamics of central systemic degeneration in schizophrenia.- 9. Schizophrenia runs in some families, but where are the genes?- 10. Changes in gene expression in subjects with schizophrenia associated with disease progression.- 11. Amino acids in schizophrenia – glycine, serine and arginine.- 12. Developmental consequences of prenatal immune activation.- 13. Glutamatergic neurotransmission abnormalities and schizophrenia.- 14. Mathematical models in schizophrenia.- 15. Methamphetamine psychosis: a model for biomarker discovery in schizophrenia.- 16. What does proteomics tell us about schizophrenia?- 17. The role of 3α-hydroxy-5α-pregnan-20-one in mediating the development and/or expression of schizophrenia spectrum disorders: Findings in rodents models and clinical populations.- 18. Neural substrates of emotion dysfunctions in patients with schizophrenia spectrum disorders.- 19. Brain morphological abnormalities at the onset of schizophrenia and other psychotic disorders. A review of the evidence.

Fields of interest
Neurosciences; Neurobiology; Neurology

Target groups
Research

Discount group
P

Due April 2011

2011. 200 p. 76 illus., 52 in color. Hardcover

► **approx. $189.00**
ISBN 978-94-007-0836-5

M. Ritsner, Professor of Psychiatry and Head of Cognitive & Psychobiology Research Laboratory, the Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel (Ed.)

Handbook of Schizophrenia Spectrum Disorders, Volume II

Phenotypic and Endophenotypic Presentations

A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizophreniform disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these disorders. Recent technological breakthroughs in basic sciences hold promise for advancing our understanding of the pathophysiology of schizophrenia spectrum disorders. This collective monograph reviewers recent researches regarding the origins, onset, course, and outcome of schizophrenia spectrum disorders. In particular, this book will be illustrate new developments in terms of conceptual models, and research methodology, genetics and genomics, brain imaging and neurochemical studies, neurophysiology and information processing in schizophrenia spectrum disorders patients.

Features
► Classification of the schizophrenia spectrum disorders ► Neurobiological challenges ► Phenotypic and endophenotypic presentations ► Therapeutic approaches ► Outcomes

Fields of interest
Neurosciences; Neurobiology; Neurology

Target groups
Research

Discount group
P

Due April 2011

2011. 21 illus., 11 in color. Hardcover

► **approx. $189.00**
ISBN 978-94-007-0830-3

M. Ritsner, Technion - Israel Institute of Technology, Haifa, Israel (Ed.)

Handbook of Schizophrenia Spectrum Disorders, Volume III

Therapeutic Approaches, Comorbidity, and Outcomes

Contents
Foreword. Schizophrenia Spectrum Disorders: Insights from views across 100 years.- 1. Recovery in schizophrenia: perspectives, evidence, and implications.- 2. The magic shotgun: does it fit the clinician and will it point at schizophrenia?- 3. Advancing neuroprotective-based treatments for schizophrenia.- 4. Prevention and early intervention in at risk states for developing psychosis.- 5. Early improvement and its predictive validity in first-episode schizophrenia patients.- 6. Antioxidants as a treatment and prevention of tardive dyskinesia.- 7. Electrophysiological imaging evaluation of schizophrenia and treatment response.- 8. Coping with schizophrenia: measuring coping styles, patterns and temporal types.- 9. Interventions targeting social and vocational dysfunction in individuals with a schizophrenia spectrum disorder.- 10. Revisiting cognitive remediation for schizophrenia: Facing the challenges of the future.- 11. Individual psychotherapy for schizophrenia: an overview of its history, recent developments and new directions.- 12. An overview of cognitive behavior therapy in schizophrenic spectrum disorders.- 13. Schizophrenia and medical illness: consequences of schizophrenia or its treatment?- 14. The interface of cannabis misuse and schizophrenia-spectrum disorders.- 15. Schizophrenia and comorbid substance abuse – pathophysiological and therapeutic approaches.- 16. Suicidality and outcome in schizophrenia patients.- 17. The relationship between religiousness/spirituality and schizophrenia: implications for treatment and community support.- 18. The ethical ramifications of biomarker use for mood disorders.- Afterword. The future of the schizophrenia construct and acquisition of new knowledge.

Fields of interest
Neurosciences; Neurobiology; Neurology

Target groups
Research

Discount group
P

Due April 2011

2011. 200 p. 11 illus., 5 in color. Hardcover

► **approx. $189.00**
ISBN 978-94-007-0833-4

M. W. Robinson, University of Technology Sydney, Ultimo, Sydney, Australia; **J. P. Dalton**, McGill University, St. Anne de Bellevue, Quebec, Canada (Eds.)

Cysteine Proteases of Pathogenic Organisms

Cysteine proteases expressed by pathogenic organisms play key roles in virulence including host entry, feeding and suppression of host immune responses. This book gives comprehensive coverage to all aspects of pathogen cysteine proteases and brings together numerous scientific advances which have been made over many years. Thus, the biochemistry, molecular biology and structure-function relationships of these important pathogen enzymes are covered in detail. Written by leading researchers from Europe, Australia and North America, this book is essential reading for students and professionals interested in human medicine and infectious disease research.

Features
► Written by leading researchers from Europe, Australia and North America ► Review recent developments in bacterial cysteine proteases ► Focuses on protozoan parasites of medical importance ► Covers cysteine proteases from helminths of medical and veterinary importance

From the contents
Papa In-Like Proteases Of Staphylococcus Aureus.- The Lysine-Specific Gingipain Of Porphyromonas: Importance To Pathogenicity.- Falcipains And Other Cysteine Proteases Of Malaria Parasites.- Cathepsin Proteases In Toxoplasma Gondii.- Entamoeba Histolytica Cathepsin-Like Enzymes.- Cysteine Peptidases Of Kinetoplastid Parasites.- Cruzain: The Path From Target Validation To The Clinic.- The Phylogeny, Structure And Function Of Trematode Cysteine Proteases, With Particular Emphasis On The Fasciola Hepatica Cathepsin L Family.- Cathepsins B1 And B2 Of Trichobilharzia Spp., Bird Schistosomes Causing Cercarial Dermatitis.

Fields of interest
Biomedicine general; Molecular Medicine

Target groups
Research

Discount group
P

Due March 2011

2011. XX, 222 p. 37 illus., 6 in color. (Advances in Experimental Medicine and Biology, Volume 712) Hardcover

► **$189.00**
ISBN 978-1-4419-8413-5

M. Rodnina, **W. Wintermeyer**, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany; **R. Green**, Johns Hopkins University, Baltimore, MD, USA (Eds.)

Ribosomes: Structure, Function and Dynamics

The ribosome is a macromolecular machine that synthesizes proteins with a high degree of speed and accuracy. Our present understanding of its structure, function and dynamics is the result of six decades of research. This book collects over 40 articles based on the talks presented at the 2010 Ribosome Meeting, held in Orvieto, Italy, covering all facets of the structure and function of the ribosome. New high-resolution crystal structures of functional ribosome complexes and cryo-EM structures of translating ribosomes are presented, while partial reactions of translation are examined in structural and mechanistic detail, featuring translocation as a most dynamic process. Mechanisms of initiation, both in bacterial and eukaryotic systems, translation termination, and novel details of the functions of the respective factors are described. Structure and interactions of the nascent peptide within, and emerging from, the ribosomal peptide exit tunnel are addressed in several articles. Structural and single-molecule studies reveal a picture of the ribosome exhibiting the energy landscape of a processive Brownian machine. The collection provides up-to-date reviews which will serve as a source of essential information for years to come.

Features
► First ribosome book since 2001 ► Nobel Prize Chemistry 2009 -The Ribosome ► Includes chapters of all three Nobel Prize winners ► Comprehensive in scope

Fields of interest
Gene Expression; Nucleic Acid Chemistry; Biophysics and Biological Physics

Target groups
Research

Discount group
P

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2011. Approx. 600 p. 250 illus., 150 in color. Hardcover

► **approx. $239.00**
ISBN 978-3-7091-0214-5

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Encyclopedia of Traditional Chinese Medicines – Molecular Structures, Pharmacological Activities, Natural Sources and Applications

This set of six volumes provides a systematic and standardized description of 23,033 chemical components isolated from 6,926 medicinal plants, collected from 5,535 books/articles published in Chinese and international journals. A chemical structure with stereo-chemistry bonds is provided for each chemical component, in addition to conventional information, such as Chinese and English names, physical and chemical properties. It includes a name list of medicinal plants from which the chemical component was isolated. Furthermore, abundant pharmacological data for nearly 8,000 chemical components are presented, including experimental method, experimental animal, cell type, quantitative data, as well as control compound data. The seven indexes allow for complete cross-indexing. Regardless whether one searches for the molecular formula of a compound, the pharmacological activity of a compound, or the English name of a plant, the information in the book can be retrieved in multiple ways.

Features
► For the first time, a collection of more than 20,000 chemical components of medicinal plants for studying TCM is provided ► Has a systematic and integrated approach ► With seven indexes the information in the book can be retrieved in multiple ways

Fields of interest
Pharmaceutical Sciences/Technology; Pharmacology/Toxicology; Biochemistry, general

Target groups
Research

Discount group
P

Due February 2011

2011. XXVI, 3934 p. (6-volume-set)

► **$1349.00**
ISBN 978-3-642-17733-0

Here we present a multiplexed fluorescence microscopy method (MxIF) for quantitative, single-cell, and subcellular characterization of multiple analytes in formalin-fixed paraffin-embedded tissue. Chemical inactivation of fluorescent dyes after each image acquisition round allows reuse of common dyes in iterative staining and imaging cycles.Â Motivated by the need to maximize biomarker data from costly drug discovery efforts and clinical trials, shrinking sample sizes, and increasing appreciation of disease complexity, the use of multiplexed molecular analysis has steadily increased (7). Formalin-fixed paraffin-embedded (FFPE) tissue is the most common form of preserved archived clinical sample. Compared with fresh frozen tissue, formalin-fixed paraffin-embedded (FFPE) tissue has several advantages: (1) preservation of the cellular and architectural morphology; (2) the possibility of storage at room temperature for several years; (3) easy availability, as FFPE blocks are routinely prepared in the pathology departments of most centers.Â All tumor tissue samples were obtained from surgically resected primary CRC tumor specimens. The resected tissue was divided into two parts. One part was frozen in liquid nitrogen <30 min after surgery and stored at âˆ’80Â°C until the time of DNA extraction; the other part was fixed in 4% formalin for 24â€“72 h and embedded in paraffin, and then stored at room temperature. Formalin-fixed paraffin-embedded tissue (FFPET) samples represent the clinical standard of tissue fixation, and huge archives of this material offer a valuable source for biomarker identification and validation. For this reason, techniques for efficient and reliable analysis of FFPET are important for rapid advances in personalized health care (PHC). Formalin Fixed Paraffin Embedded DNA Amplification. DNA isolated from archived tissue is often of poor quality making it unsuitable for most commercially available whole genome amplification kits that require high quality starting material. The flexibility of the GenomePlex technology enables the use of compromised starting material, such as DNA isolated from FFPE tissue, for whole genome amplification. We offer products for the purification of DNA from FFPE tissue (G1N10) and subsequent whole genome amplification (WGA2). White Papers. Genomic Analysis of Formalin-Fixed Paraffin Embedded (FFPE) ... Authoritative and accessible, Formalin-Fixed Paraffin-Embedded Tissues: Methods and Protocols serves as a practical guide for scientists of all backgrounds and aims to convey the appropriate sense of fascination associated with this vital field of research. Product details. ASIN : 1617790540. Publisher : Humana; 2011th edition (February 16, 2011). Language : English. Hardcover : 324 pages. ISBN-10 : 9781617790546.

Formalin Fixed Paraffin Embedded DNA Amplification. DNA isolated from archived tissue is often of poor quality making it unsuitable for most commercially available whole genome amplification kits that require high quality starting material. The flexibility of the GenomePlex technology enables the use of compromised starting material, such as DNA isolated from FFPE tissue, for whole genome amplification. We offer products for the purification of DNA from FFPE tissue (G1N10) and subsequent whole genome amplification (WGA2). White Papers. Genomic Analysis of Formalin-Fixed Paraffin Embedded (FFPE) ... The purpose of this protocol is to take any biopsy or whole organ tissue from animals or human, formalin-fix the specimen to preserve the current state of the tissue, and embed it into a paraffin block and for future immunohistochemistry experiments (If you intend to fix cells, check the alternative protocols: Preparation of Cells for Microscopy using Cytospin, Preparation of Cells for. Microscopy using Chamber Slides and Coverslips, or Preparation of Cells for Microscopy using 'Cell Blocks'). Keywords: Fixation of tissue; Formalin-fixed paraffin-embedded tissue (FFPET); Immunohistoc DNA Extraction from Formalin-Fixed, Paraffin-Embedded Tissue. February 2009. Cold Spring Harbor Protocols 2009(2):pdb.prot5138.Â RNA and DNA extracted from formalin-fixed paraffin-embedded (FFPE) tissue is problematic due to chemical modifications and continued degradation over time. we compared quantity of RNA extracted by two different protocols from 14 recently archived from patients suffered from different cancers distributed among formalin-fixed paraffin-embedded (FFPE) breast cancer tissues ,thyroid cancer tissues and Cervical uterus carcinoma tissues by using Guanidine. Formalin-fixed paraffin-embedded (FFPE) tissues are an important sample source for retrospective studies. Despite its ability to preserve proteins and cell morphology, formalin hinders molecular biology tests since it fragments and chemically modifies nucleic acids, especially RNA. Although several studies describe techniques that allow extracting nucleic acids from FFPE tissues, so far there is no consensus in the literature about the best protocol to be used in this type of material.Â Open access peer-reviewed chapter. Nucleic Acids Extraction from Formalin-Fixed and Paraffin-Embedded Tissues. By Gisele R. Gouveia, Suzete C. Ferreira, Sheila A. C. Siqueira and Juliana Pereira. Submitted: May 5th 2015Reviewed: September 22nd 2015Published: March 16th 2016. Formalin fixed paraffin embedded tissue (FFPE) processing is a modern method used in clinical diagnostics and archives for the preservation of tissues. Specimens taken represent a wide variety of clinically tested samples stored for long durations at room temperature. Formalin Fixed Paraffin Embedded (FFPE) tissues have been proven to offer a great deal in retrospective analysis of pathological processes as compared to cyropreserved specimens which are in most cases deemed complicated and hugely challenging. However, the overall quality of samples is compromised due to DNA trapping and fragmen