**E-Cell System**

**Basic Concepts and Applications**

The interdisciplinary field of molecular systems biology aims to understand the behavior and mechanisms of biological processes composed of individual molecular components. As we gain more qualitative and quantitative information of complex intracellular processes, biochemical modeling and simulation become indispensable not only to uncover the molecular mechanisms of the processes, but to perform useful predictions.

**Features**

▶ Provides an overview of whole cell modeling and its fundamental concepts
▶ Describes the Spatiocyte lattice-based simulation method which is developed as a set of E-Cell System plug in modules
▶ Provides examples of actual modeling applications that use the E-Cell System

**Contents**


**Fields of interest**

Molecular Medicine; Biomedicine general

**Target groups**

Research

**Product category**

Contributed volume

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**Array Comparative Genomic Hybridization**

**Protocols and Applications**

**Contents**

Virginia Woolf and Neuropsychiatry

This book, written by one of the leaders in the field of the neurosciences, will give an explanation of the symptoms and eventual untimely suicide of one of literature’s greatest authors; Virginia Woolf. The sources used are letters and statements from Woolf herself, the literature she wrote and comments, letters and any other documentation that referred to her mental state and her medical status. The author will use current insight into depression, the mental consequences of child abuse and drug interactions/effects to illustrate this case study.

Features
- A book that is suitable for a wide audience
- An in depth analysis of one of literature’s leading and most loved individuals
- A unique insight into the mind

Contents

Fields of interest
Biomedicine general; Neurosciences; Neurobiology

Target groups
Popular/general

Product category
Monograph

Gene Regulation

M. Bina, Purdue University, West Lafayette, IN, USA (Ed)

Methods and Protocols

Contents

Features
- Presents current knowledge on viral and cellular oncogenesis and various aspects of host-tumor interactions
- Dedicated to therapists: NPC radiotherapy in terms accessible for the laymen, medical or systemic treatments of NPC and NPC immunotherapy
- With numerous figures and tables

Contents

Fields of interest
Biomedicine general; Cancer Research

Target groups
Research

Product category
Contributed volume
Biomedicine

T. J. Cleophas, European College Pharmaceutical Medicine, Lyon, France; A. H. Zwinderman, European Interuniversity, Lyon, France

Machine Learning in Medicine

Features
- Electronic health records of modern health facilities, are increasingly complex and systematic assessment of these records is virtually impossible without special computationally intensive methods - Clinicians and other health professionals are not familiar with these methods, and this book is the first publication that systematically reviews such methods, particularly, for this audience - The book is written as a hand-held presentation also accessible to non-mathematicians, and as a must-read publication for those new to the methods - The book includes step by step data analyses in SPSS, and can, therefore, also be used as a cookbook-like guide for those starting with the novel methodologies

Contents

Fields of interest
Biomedicine general; Entomology; Medicine/Public Health, general

Target groups
Popular/general

Product category
Graduate/Advanced undergraduate textbook

Due January 2013
2013. X, 229 p. 44 illus., in color. Hardcover
- * € (D) 74,85 | € (A) 76,95 | sFr 93,50
- * € 69,95 | £62.99
ISBN 978-94-007-5823-0

D. Corbi, Dresden University of Technology, Germany (Ed)

Prominin-1 (CD133): New Insights on Stem & Cancer Stem Cell Biology

Contents

Fields of interest
Cancer Research; Stem Cells; Medical Microbiology

Target groups
Research

Product category
Contributed volume

Due November 2012
2013. XVI, 262 p. 29 illus., 28 in color. (Advances in Experimental Medicine and Biology, Volume 777) Hardcover
- * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- * € 139,95 | £126.00

A. Dey, Anna University, Chennai, India (Ed)

Cytochrome P4502E1: Its Role in Disease and Drug Metabolism

The book deals with various clinical aspects of cytochrome P450 2E1 (CYP2E1) which is a potent source for oxidative stress. Oxidative stress is critical for pathogenesis of diseases and CYP2E1 is a major contributor for oxidative stress.

Contents
Cytochrome P450 2E1 and its clinical aspects. - Nrf2 and antioxidant defense against CYP2E1 toxicity. - The role of Cytochrome P-4502E1 in ethanol-mediated carcinogenesis. - The Importance of CYP2E1 in the pathogenesis of alcoholic liver disease and drug toxicity and the role of the proteasome. - Relevance of CYP2E1 to non-alcoholic fatty liver disease. - CYP2E1-catalyzed alcohol metabolism. - CYP2E1, oxidative stress, post-translational modifications and lipid metabolism. - The role of CYP2E1 in alcohol metabolism and sensitivity in the central nervous system.

Fields of interest
Pharmacology/Toxicology; Life Sciences, general; Biochemistry, general

Target groups
Research

Product category
Contributed volume

Due February 2013
2013. X, 290 p. 35 illus., 5 in color. Hardcover
- approx. * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- approx. * € 139,95 | £126.00
ISBN 978-94-007-5880-3
Tumors of the Central Nervous System, Volume 10
Pineal, Pituitary, and Spinal Tumors

Contents

Fields of interest
Cancer Research; Biomedicine general; Oncology

Target groups
Graduate

Product category
Contributed volume

Due December 2012
2013. XXXIII, 448 p. 67 illus., 48 in color. (Tumors of the Central Nervous System, Volume 10) Hardcover

* € (D) 181,85 | € (A) 186,94 | sFr 226,50

ISBN 978-94-007-5680-9

Due November 2012

* € (D) 160,45 | € (A) 164,94 | sFr 200,00


Due December 2012
2013. XIV, 362 p. 37 illus., 15 in color. (Progress in Inflammation Research) Hardcover

* € (D) 149,75 | € (A) 153,94 | sFr 186,50

ISBN 978-3-0348-0540-7

Contributed volume

Biomedicine

M. Hayat, Kean University, NJ, USA (Ed)

Cellular Trafficking of Cell Stress Proteins in Health and Disease

Contents

Fields of interest
Human Physiology; Life Sciences, general; Neurosciences

Target groups
Research

Product category
Contributed volume

Antimicrobial Peptides and Innate Immunity

Antimicrobial peptides have been the subject of intense research in the past decades, and are now considered as an essential part of the defense system in bacteria, plants, animals and humans.

Features
- Provides a comprehensive overview on these endogenous antibiotics - Includes information on role in inflammatory diseases and gives an outlook on new therapeutic options - Written by experts in the field of antimicrobial/host defense peptide research

Contents

Fields of interest
Immunology; Infectious Diseases; Biochemistry, general

Target groups
Research

Product category
Contributed volume
JIMD Reports

E. Morava, G. Brown (Eds), Managing editor: V. Peters, Editor-in-chief: J. Zschocke, K. M. Gibson

Volume 8

J. Zschocke, Medical University Innsbruck, Austria; K. M. Gibson, Michigan Technological University, Houghton, MI, USA; G. Brown, University of Oxford, UK; E. Morava, Radboud University Nijmegen, The Netherlands; V. Peters, Heidelberg University Hospital, Germany (Eds)

JIMD Reports - Case and Research Reports, 2012/5

JIMD Reports publishes case and short research reports in the area of inherited metabolic disorders. Case reports highlight some unusual or previously unrecorded feature relevant to the disorder, or serve as an important reminder of clinical or biochemical features of a Mendelian disorder.

Features

- Unique collection of case and research reports on rare metabolic disorders
- Contains unusual or previously unrecorded features relevant to metabolic disorders
- All contributions rigorously peer-reviewed

Contents

Different case studies.

Fields of interest

Human Genetics; Metabolic Diseases; Pediatrics

Target groups

Research

Product category

Contributed volume

L. Kaestner, Universität des Saarlandes, Saarbrücken, Germany

Calcium signalling

Approaches and Findings in the Heart and Blood

The book combines general concepts and methods to investigate calcium signalling in cells ranging from molecular biology approaches to manipulation of calcium in living cells. The focus within these methods in on the broad range of fluorescence imaging technology, in particular on optical sectioning techniques and fast image acquisition. In addition to these general guidelines there are application examples in a context beyond calcium signalling in two major fields: investigations of isolated cardiac myocytes and red blood cell related research. While the cellular cardiology section provides snapshots of certain calcium signalling aspects, the red blood cell part presents an overview from the functional identification of calcium–channels to a concept of physiological and pathophysiological relevance.

Features

- Broad topical coverage from general concepts to detailed examples
- 96 Figures and 4 Tables
- Includes latest developments and research results

Contents

Summary.- Calcium Signalling Methodology.- Calcium Signalling in Cardiac Myocytes.- Calcium Signalling in Red Blood Cells.- Index.

Fields of interest

Biomedicine general; Biological Microscopy; Cardiology

Target groups

Professional/practitioner

Product category

Monograph
Biomedicine

Global Approach in Safety Testing
ICH Guidelines Explained

Contents

Fields of interest
Pharmaceutical Sciences/Technology; Biomedicine general

Target groups
Research

Product category
Contributed volume

Due February 2013

2013. XII, 317 p. 12 illus., 10 in color. (AAPS Advances in the Pharmaceutical Sciences Series, Volume 5) Hardcover
- * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- € 139,95 | £126.00
ISBN 978-1-4614-5949-1

Due December 2012

2013. XXVIII, 170 p. 15 illus., 13 in color. Hardcover
- * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- € 139,95 | £126.00
ISBN 978-1-4614-4659-0

Genetic and Molecular Epidemiology of Multiple Myeloma

Multiple myeloma is a plasma cell malignancy characterized by complex heterogenous cytogenetic abnormalities that accounts for 1.4% of all cancers, and approximately 10% of hematologic malignancies. The clinical manifestations of multiple myeloma include lytic bone lesions, cytopenia, hypercalcemia, renal dysfunction, hyperviscosity of the blood, immunodeficiency, and peripheral neuropathy. Based on the clinical and genetic data, probably all cases of multiple myeloma arise from an asymptomatic monoclonal gamopathy of unknown significance. The exact mechanism of the transition from MGUS to overt multiple myeloma is still not well understood.

Features
- Explores the role of protein translation in multiple myeloma
- Discusses epigenetic gene silencing as a new target for multiple myeloma
- Examines the cell cycle control of plasma cell differentiation

Contents
Preface. - Genetics of Multiple Myeloma. - Gene expression signature in MGUS and multiple myeloma. - Cap-Dependent Protein Translation Initiation in Multiple Myeloma: an Attractive Target for Therapy. - IRES-dependent, CAP-independent translation in Multiple Myeloma. - Epigenetic gene silencing as a new target for multiple myeloma. - Role of Bone Disease in the Pathogenesis of Multiple Myeloma. - Index.

Fields of interest
Cancer Research; Cell Biology; Human Genetics

Target groups
Research

Product category
Contributed volume

Due February 2013

- approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
- approx. € 99,95 | £90.00
ISBN 978-94-007-5895-1

Radiation Proteomics

The effects of ionizing and non-ionizing radiation on cells and tissues

Methods of proteomics have been shown to be powerful tools in search of target proteins – proteins that respond in cells to an internal or an external stimulus. Proteomics is widely used in biomedical research.

Features
- Up to date review of proteomics studies examining radiation effects on cells and tissues
- Included both ionizing and non-ionizing radiation effects
- Review of low-dose ionizing radiation effects
- Review of therapeutic doses of ionizing radiation effects
- Search for biomarkers of response/damage
- Non-ionizing radiation effects

Contents
Mass spectrometry-based proteomics: Basic principles and emerging technologies and directions. - Ionizing radiation effects on cells, organelles and tissues on proteome level. - Radiation treatment effects on the proteome of the tumour microenvironment. - Serum and plasma proteomics and its possible use as detector and predictor of radiation diseases. - The Urine Proteome as a Radiation Dodosimeter. - Effects of radiofrequency-modulated electromagnetic fields on proteome. - Global protein expression in response to extremely low frequency magnetic fields. - Ultraviolet radiation effects on the proteome of skin cells. - Effects of ultraviolet radiation on skin cell proteome.

Fields of interest
Biomedicine general; Proteomics; Effects of Radiation/Radiation Protection

Target groups
Research

Product category
Contributed volume
**Advances in Biology and Therapy of Multiple Myeloma**

**Contents**


**Fields of interest**

Biomedicine general; Health Promotion and Disease Prevention; Neurology

**Target groups**

Research

**Product category**

Contributed volume

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**Due December 2012**

2nd revised edition

2013. XX, 530 p. (2-volume set) | *approx.* € (D) 245,03 | € (A) 251,90 | sFr 299,00

| approx. € 229,00 | £202.50

ISBN 978-1-4614-6091-6

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**IL-17, IL-22 and Their Producing Cells: Role in Inflammation and Autoimmunity**

**Contents**

IL-17A family, receptors, proinflammatory effects and production. - IL-22 and IL-17 overview. - IL-17R family: Structure, signal transduction and function. - Contribution of IL-22 to Th17 responses: repairing and protecting peripheral tissues. - Central role of Th-17 cells in adaptive immune responses. - Regulatory T cells vs Th17. - Differentiation of Th17 versus Treg are they mutually exclusive Other sources of IL-17: iNKT cells. - Retinoic acid in mucosal immune regulation. - Critical role of IL-17 in experimental arthritis. - Dual role IL-17A, F and IL-22 in allergic asthma. - Inflammation: IL-1 - IL-17 response in lung inflammation. - The role of IL-17 in exp autoimmune myocarditis. - Th17 cells in transplantation: actors or innocent bystanders. - Is IL-17 required to control of tuberculosis IL-17 and mucosal host defense. - Role of IL-17 and IL-17 family cytokines in tumor development. - IL-17 and TH17 cells in rheumatoid arthritis and other inflammatory conditions. - Targeting Th17 Cells for therapy of multiple sclerosis. - Involvement of interleukin-17 cytokines in human asthma. - IL-17 and/or IL-22 as potential target(s) for Crohn’s disease. - Role of IL-23, IL-17 and IL-22 in psoriasis. - Contribution of IL-22 to experimental skin inflammation. - Genetic mouse models to investigate IL-17 responses. - IL-17A as a therapeutic target for autoimmune diseases.

**Fields of interest**

Immunology; Cytokines and Growth Factors; Receptors

**Target groups**

Research

**Product category**

Monograph
**Biomedicine**

J. A. Radosevich, University of Illinois, Chicago, II, USA (Ed)

**Head & Neck Cancer: Current Perspectives, Advances, and Challenges**

**Contents**

**Fields of interest**  
Cancer Research; Oncology; Otorhinolaryngology  

**Target groups**  
Research  

**Product category**  
Contributed volume

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

**Polypharmacy in Psychiatry Practice, Volume I**  
**Multiple Medication Use Strategies**

**Features**
- This is the first comprehensive volume regarding the multiple medication use in psychiatry
- Preclinical and clinical investigation of the multiple medication use in psychiatry
- Evidence-based monitoring important research developments in this field

**Contents**

**Fields of interest**  
Biomedicine general; Psychiatry; Pharmacy  

**Target groups**  
Professional/practitioner  

**Product category**  
Contributed volume

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

**Polypharmacy in Psychiatry Practice, Volume II**  
**Use of Polypharmacy in "Real World"**

**Features**
- This is the first comprehensive volume regarding the multiple medication use in psychiatry
- Preclinical and clinical investigation of the multiple medication use in psychiatry
- Evidence-based monitoring important research developments in this field

**Contents**
1. Antipsychotic polypharmacy for schizophrenia: ‘Secret sauce’ or ‘wild abandon’? - Antipsychotic polypharmacy in USA - Antipsychotic polypharmacy in Czech Republic and in Ukraine - Antipsychotic polypharmacy in residential facilities in Italy: the gap between recommendations and real world practice - Antipsychotic polypharmacy and associated phenomena in patients with schizophrenia: Rational or irrational? - Antipsychotic polypharmacy in schizophrenia. How to counteract this common practice? - Clozapine combinations in treatment-resistant schizophrenia patients - Metabolic syndrome and antipsychotic polypharmacy - Evidence based combination therapy for bipolar disorder - Antidepressant combination strategies for major depressive disorder - Herbal remedies and nutraceuticals as augmentation or adjunct for mood and anxiety disorders: evidence for benefit and risk - Obsessive-compulsive syndromes in schizophrenia: A case for polypharmacy? - Polypharmacy and potentially inappropriate medication use among elders with dementia - The role of polypharmacy in bipolar disorder treatment guidelines

**Fields of interest**  
Biomedicine general; Psychiatry; Pharmacy  

**Target groups**  
Professional/practitioner  

**Product category**  
Contributed volume
I. Roterman-Konieczna, Department of Bioinformatics and Telemedicine, Jagiellonian University, Medical College, Cracow, Poland (Ed)

Identification of Ligand Binding Site and Protein-Protein Interaction Area

Features
- Comparative analysis of models based on geometry versus those based on knowledge of the biological phenomenon
- All illustrations in full color
- A review of the latest numerical techniques used to identify ligand binding and protein complexation sites

Contents

Field of interest
Biomedicine general

Target groups
Research

Product category
Contributed volume

Statin: A Chemopreventive Agent for Liver Carcinogenesis in Rat

Statin is a potential antihypercholesterolemic agent, which inhibits 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase, the rate limiting enzyme of cholesterol biosynthesis. The beneficial effects of statin therapy, however, are not limited to patients with hypercholesterolemia. Increasing evidence suggest that an activity level of HMG-CoA reductase may affect various cellular functions such as DNA synthesis, cell proliferation, diverse signal transduction pathways leading to pathogenesis. The use of HMG-CoA reductase inhibitor in varying diseases is under investigation. This book is the most current hands-on book in the field of hepatocarcinogenesis.

Features
- The book deals with noble use of statin for prevention and treatment of cancer and thus provides a platform for the researchers in cancer therapy
- The text is well supported by color photographs of hepatic histopathology (morphometric analysis) providing the evidence of cancer inhibitory effect of statin
- The easy demonstration of the research methodology helps the researcher to learn quickly

Contents

Fields of interest
Cancer Research; Protein-Ligand Interactions; Enzymology

Target groups
Research

Product category
Brief

Due November 2012
2013. X, 167 p. 58 illus., 47 in color. (Focus on Structural Biology, Volume 8) Hardcover
- € (D) 149,75 | € (A) 153,94 | sFr 186,50
- € 139,95 | £126.00
ISBN 978-94-007-5284-9
Biomedical Applications of Peptide-, Glyco- and Glycopeptide Dendrimers, and Analogous Dendrimeric Structures

Contents

Fields of interest
Molecular Medicine; Biomedicine general; Pharmaceutical Sciences/Technology

Target groups
Research

Product category
Monograph

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Immune Homeostasis
Methods and Protocols

Contents
Z. Wang, University of Pittsburgh, PA, USA (Ed)

Androgen-Responsive Genes in Prostate Cancer

Regulation, Function and Clinical Applications

Contents

Preface.- Roles of androgen receptor coregulators and cell signaling in regulation of androgen-responsive genes.- Selective and classical Androgen Response Elements in androgen-regulated gene expression.- Negative androgen-response elements in androgen target genes.- Chromatin looping and long distance regulation by androgen receptor.- The Functionality of Prostate Cancer Predisposition Risk Regions is revealed by AR Enhancers.- Mechanisms of ARE-Independent Gene Activation by the Androgen Receptor in Prostate Cancer Cells: potential targets for better intervention strategies.- Androgen action, Wnt signaling, and prostate tumorigenesis.- Toward Revealing the Complexity of Androgen Responsive Protein and Non-coding Transcripts in Prostate Cancer.- Androgen-Responsive Gene Expression in Prostate Cancer Progression.- Androgen receptor regulated genes in prostate cancer initiation vs metastasis.- Androgen-Independent Induction of Androgen-Responsive Genes By Interleukin-6 Regulation.- The effect of AR overexpression on androgen signaling in prostate cancer.- The expression signature of androgen receptor splice variants and their distinctive transcriptional activities in castration-resistant prostate cancer.- Androgen regulation of the cell cycle in prostate cancer.- Androgen Receptor Signaling Interactions Control Epithelial-Mesenchymal Transition (EMT) in Prostate Cancer Progression.- Androgen receptor regulation of serum response factor signaling in prostate cancer. [...] 

Fields of interest

Cancer Research; Gene Therapy; Human Genetics

Target groups

Research

Product category

Contributed volume

Due February 2013

2013. X, 365 p. 42 illus., 35 in color. Hardcover

A. Y. Yakovlev, University of Rochester, Rochester, NY, USA; L. B. Klebanov, Charles University, Prague, Czech Republic; D. Gaile, State University of New York at Buffalo, Buffalo, NY, USA (Eds)

Statistical Methods for Microarray Data Analysis

Methods and Protocols

Microarrays for simultaneous measurement of redundancy of RNA species are used in fundamental biology as well as in medical research. Statistically, a microarray may be considered as an observation of very high dimensionality equal to the number of expression levels measured on it. 

Contents


Fields of interest

Human Genetics; Microarrays

Target groups

Professional/practitioner

Product category

Contributed volume

Due November 2012

2013. X, 332 p. 112 illus., 86 in color. (Molecular Biology, Volume 972) Hardcover

A. A. Weir, M. Collins, Charles River Laboratories, Reno, NV, USA (Eds)

Assessing Ocular Toxicology in Laboratory Animals

Ocular toxicity is routinely assessed in toxicology studies conducted for regulatory purposes. Ocular anatomy and physiology and the assessment of ocular toxicity itself can be challenging to scientists involved in the safety assessment of pharmaceuticals, pesticides and other agents.

Features

► Concise reference addressing ocular anatomy and physiology across species ► Will enhance the design and interpretation of toxicity studies conducted for regulatory purposes ► An overview of routine and advanced techniques that are used to assess ocular toxicity ► Authoritative, accessible guide for toxicologists and other scientists involved in conducting toxicology studies for regulatory purposes

Contents


Fields of interest

Pharmacology/Toxicology; Ophthalmology; Animal Models

Target groups

Professional/practitioner

Product category

Contributed volume

Due January 2013

2013. XV, 230 p. 34 illus., 14 in color. (Methods in Molecular Biology, Volume 972) Hardcover

Z. Wang, University of Pittsburgh, PA, USA (Ed)

Androgen-Responsive Genes in Prostate Cancer

Regulation, Function and Clinical Applications

Contents

Preface.- Roles of androgen receptor coregulators and cell signaling in regulation of androgen-responsive genes.- Selective and classical Androgen Response Elements in androgen-regulated gene expression.- Negative androgen-response elements in androgen target genes.- Chromatin looping and long distance regulation by androgen receptor.- The Functionality of Prostate Cancer Predisposition Risk Regions is revealed by AR Enhancers.- Mechanisms of ARE-Independent Gene Activation by the Androgen Receptor in Prostate Cancer Cells: potential targets for better intervention strategies.- Androgen action, Wnt signaling, and prostate tumorigenesis.- Toward Revealing the Complexity of Androgen Responsive Protein and Non-coding Transcripts in Prostate Cancer.- Androgen-Responsive Gene Expression in Prostate Cancer Progression.- Androgen receptor regulated genes in prostate cancer initiation vs metastasis.- Androgen-Independent Induction of Androgen-Responsive Genes By Interleukin-6 Regulation.- The effect of AR overexpression on androgen signaling in prostate cancer.- The expression signature of androgen receptor splice variants and their distinctive transcriptional activities in castration-resistant prostate cancer.- Androgen regulation of the cell cycle in prostate cancer.- Androgen Receptor Signaling Interactions Control Epithelial-Mesenchymal Transition (EMT) in Prostate Cancer Progression.- Androgen receptor regulation of serum response factor signaling in prostate cancer. [...] 

Fields of interest

Cancer Research; Gene Therapy; Human Genetics

Target groups

Research

Product category

Contributed volume