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Closing date: February 2017
C. T. Baldari, University of Siena, Siena, Italy; M. L. Dustin, University of Oxford Kennedy Institute of Rheumatology, Headington, Oxford, UK (Eds)

The Immune Synapse

This volume provides all the essential protocols that are currently used to study the immune synapse. Chapters in The Immune Synapse: Methods and Protocols cover methods for the study of the dynamics of immune synapse assembly, traffic at the immune synapse, new high resolution imaging, biophysical and computational methods for the study of the immune synapse, effector immune synapses, B cell, NK and mast cell immune synapses, and immune interactions in vivo. [...] 

Due February 2017
Contributed volume

2017. VIII, 647 p. 114 illus., 89 illus. in color. (Methods in Molecular Biology, Volume 1584) Hardcover
€ (D) 133.74 | € (A) 137.49 | *CHF 137.50
€ 124,99 | £ 93.00
ISBN 978-1-4939-6879-4

M. Cristofanilli, Robert H Lurie Comprehensive Cancer Center, Chicago, IL, USA (Ed)

Liquid Biopsies in Solid Tumors

This volume, with chapters written by experts in the field of cancerous tumors, details the key factors associated with liquid biopsies in solid tumors: blood-based diagnostics; circulating tumor cells; enumeration and molecular analysis (association with breast cancer); epithelialmesenchymal transition; detection and monitoring; circulating-free tumor DNA; CTCs and ctDNA; and the exosome. The field of blood-based diagnostics is rapidly evolving demonstrating the possibility of real-time molecular analysis of cancer cells and their phenotype and genotype. [...] 

Due March 2017
Contributed volume

2017. XII, 180 p. 14 illus., 12 illus. in color. (Cancer Drug Discovery and Development) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-50955-6

T. A. Bhat, Government of Jammu and Kashmir, Srinagar, India; A. A. Wani, University of Kashmir, Srinagar, India (Eds)

Chromosome Structure and Aberrations

This book is a compilation of various chapters contributed by a group of leading researchers from different countries and covering up to date information based on published reports and personal experience of authors in the field of cytogenetics. Beginning with the introduction of chromosome, the subsequent chapters on organization of genetic material, karyotype evolution, structural and numerical variations in chromosomes, B-chromosomes and chromosomal aberrations provide an in-depth knowledge and easy understanding of the subject matter. [...] 

Due April 2017
Contributed volume

2017. X, 211 p. 7 illus., 5 illus. in color. Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-50840-5

M. C. Ferran, Rochester Institute of Technology Thomas H. Gosnell School of Life Sci., Rochester, NY, USA; G. R. Skuse, Rochester Inst of Tech Thomas H Gosnell Sch of Life Sci, Rochester, NY, USA (Eds)

Recombinant Virus Vaccines

This volume provides readers with methods and protocols for understanding the development of recombinant viruses and their use as vaccines platforms. Recombinant Virus Vaccines: Methods and Protocols details the use of recombinant vaccines that are employed to either produce immunogens in vitro or elicit antibody production in vivo. [...] 

Due February 2017
Contributed volume

2017. VII, 271 p. 40 illus., 23 illus. in color. (Methods in Molecular Biology, Volume 1581) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00
ISBN 978-1-4939-6867-1

A. Carvalho, University of Minho, School of Medicine, Braga, Portugal (Ed)

Immunogenetics of Fungal Diseases

This book provides up-to-date information on immunogenetics of fungal diseases in the context of primary and acquired immunodeficiencies. Different aspects of this emerging field are covered, including epidemiology of fungal diseases, innate and adaptive antifungal immunity, and the role of immunogenetics in defining susceptibility to fungal diseases in primary (CMC, CGD, etc.) immunodeficiencies and hematologic patients. [...] 

Due April 2017
Contributed volume

2017. X, 211 p. 7 illus., 5 illus. in color. Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-50840-5
R. H. ffrench-Constant, University of Exeter, Penryn (Ed)

The Molecular Biology of Photorhabdus Bacteria

This book provides an essential update on the startling array of novel insecticidal toxins and drugs produced by the fascinating bacterium Photorhabdus. The respective chapters describe everything from the detailed molecular biology of the ‘Toxin complexes’ or Tc’s to the complexity of insect immune response in relation to both the bacterium and its nematode vector. The volume covers both primary (toxin production and regulation) and secondary (natural product synthesis and regulation) metabolism and emphasises the potential use of toxins and drugs in both agriculture and medicine. [...]  

Due February 2017
Contributed volume
2017. 200 p. (Current Topics in Microbiology and Immunology, Volume 402) Hardcover
€ (D) 165.84 | € (A) 170.49 | *CHF 170.50
€ 154.99 | £ 115.50
ISBN 978-3-319-52714-7

H. Fourie, North-West University, Potchefstroom, South Africa; V. W. Spaul, Durban, South Africa; R. K. Jones, Robin Jones Nematological Services, Murrayfield, Pretoria, South Africa; M. S. Daneel, Agricultural Research Council-Institute, Nelspruit, South Africa; D. De Waele, University of Leuven, Heverlee, Belgium (Eds)

Nematology in South Africa: A View from the 21st Century

This unique book contains not only a comprehensive up-to-date summary of the achievements made in all areas of Nematology in South Africa over more than half a century, but it also combines this rather technical part with an insiders narrative of how Nematology started and developed. It also demonstrates how the South African community of nematologists gradually adapted to major changes in agriculture. [...]  

Due March 2017
Contributed volume
2017. XIX, 572 p. 145 illus., 117 illus. in color. Hardcover
€ (D) 213.99 | € (A) 219.99 | *CHF 220.00
€ 199.99 | £ 149.00
ISBN 978-3-319-44208-2

C. D. Geddes, University of Maryland Baltimore County, Baltimore, MD, USA (Ed)

Reviews in Fluorescence 2016

Reviews in Fluorescence 2016, the tenth volume of the book series from Springer, serves as a comprehensive collection of current trends and emerging hot topics in the field of fluorescence and closely related disciplines. It summarizes the year’s progress in fluorescence and its applications, with authoritative reviews specialized enough to be attractive to professional researchers, yet also appealing to the wider audience of scientists in related disciplines of fluorescence. [...]  

Available
Contributed volume
2017. VIII, 360 p. 195 illus., 147 illus. in color. (Reviews in Fluorescence) Hardcover
€ (D) 181.89 | € (A) 186.99 | *CHF 187.00
€ 169.99 | £ 126.50
ISBN 978-3-319-48259-0

G. Gosset, Universidad Nacional Autónoma de México, Cuernavaca, Mexico (Ed)

Engineering of Microorganisms for the Production of Chemicals and Biofuels from Renewable Resources

This book reviews state of the art regarding strategies for generating and improving microbial strains designed for utilizing renewable raw materials. It discusses methods for genetically engineering of thermophilic bacteria, Saccharomyces cerevisiae, Escherichia coli and Zymomonas mobilis, as well as approaches for obtaining useful products from these renewable raw materials based on biotechnological processes using microbes to chemically transform them. [...]  

Available
Contributed volume
2017. VII, 200 p. 18 illus., 15 illus. in color. Hardcover
€ (D) 165.84 | € (A) 170.49 | *CHF 170.50
€ 154.99 | £ 115.50
ISBN 978-3-319-51728-5

S. Grässel, Universitätsklinikum Regensburg, Regensburg, Germany; A. Aszödi, Ludwig-Maximilians-University, Munich, Germany (Eds)

Cartilage

In three Volumes this mini book series presents current knowledge and new perspectives on cartilage as a specialized yet versatile tissue. This second volume is dedicated to basic pathologies of the two most common ostearticular diseases affecting large segments of the Western population, osteoarthritis and chondrodysplasias. This book addresses Professors, researchers and PhD students who are interested in musculoskeletal and cartilage biology and pathobiology.  

Available
Contributed volume
2017. XIII, 261 p. 27 illus., 26 illus. in color. Hardcover
€ (D) 181.89 | € (A) 186.99 | *CHF 187.00
€ 169.99 | £ 126.50
ISBN 978-3-319-45801-4
Platelets in Thrombotic and Non-Thrombotic Disorders

This book reviews current science and applications in fields including thrombosis and hemostasis, signal transduction, and non-thrombotic conditions such as inflammation, allergy and tumor metastasis. It is a detailed, up-to-date, highly referenced text for clinical scientists and physicians, including recent developments in this rapidly expanding field. More than a scientific resource, this is also an authoritative reference and guide to the diagnosis.

Due April 2017
Contributed volume
2017. XIII, 1449 p. 40 illus., 20 illus. in color. In 2 volumes, not available separately. Hardcover
€ (D) 352,03 | € (A) 361,90 | *CHF 361.50
€ 329,00 | £ 245,00
ISBN 978-3-319-47460-1

Population Epigenetics

This detailed volume focuses on population epigenetics, which is of increasing interest to policy makers searching for explanations for complex epidemiological observations and conceptual models on which to base interventions. With a concentration on DNA methylation, the emphasis is on the most commonly studied epigenetic phenomenon that is most amenable to further study. [...]  

Due April 2017
Contributed volume
2017. XII, 206 p. (Methods in Molecular Biology, Volume 1589) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00

The NMDA Receptors

This volume provides a history of and an update on the functional status of the NMDA receptors. The NMDA receptors are essential for neuronal development, synaptic plasticity, learning, and cell survival. It covers molecular, cellular, anatomical, biochemical, and behavioral aspects, to highlight their distinctive regulatory properties, their functional significance, and their therapeutic potential in a number of diseases. [...]  

Due February 2017
Contributed volume
2017. X, 148 p. 22 illus., 14 illus. in color. (The Receptors, Volume 30) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-49793-8

Basics of Human Andrology

This book addresses various aspects of male reproduction ranging from mind to testis. The basis of maleness lies in the Y chromosome. Reproductive functions depend upon the development of male organs from embryo to manhood. Testis, the male gonad, produces hormones and sperms; the latter is ejaculated in semen secreted by accessory sex glands. The testicular events are under neuroendocrine regulation which coordinates reproductive life from puberty to andropause. Biology is as important as psychology in the control of reproduction. Behaviours are rooted in the brain. [...]  

Due March 2017
Graduate/Advanced undergraduate textbook
2017. X, 542 p. 174 illus., 121 illus. in color. Hardcover
€ (D) 106,99 | € (A) 109,99 | *CHF 110.00
€ 99,99 | £ 74,50
ISBN 978-981-10-3694-1

The rights and wrongs of zebrafish: Behavioral phenotyping of zebrafish

Animal models and tests have become increasingly important for biomedical research, enabling a better understanding of pathogenic pathways involved in various human disorders. Over the last decades, zebrafish (Danio rerio) have become a very popular model organism in biomedical research. Recently, this fish has entered the field of zebrafish: Behavioral phenotyping of zebrafish. With a concentration on DNA methylation, the emphasis is on the most commonly studied epigenetic phenomenon that is most amenable to further study. [...]  

Available
Contributed volume
2017. VIII, 327 p. 77 illus., 69 illus. in color. Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-33773-9

Modern Tools of Biophysics

Handbook of Modern Biophysics brings current biophysics topics into focus, so that biology, medical, engineering, mathematics, and physical-science students or researchers can learn fundamental concepts and the application of new techniques in addressing biomedical challenges. Chapters will develop the conceptual framework of the physics for biomedical challenges. Chapters will develop the conceptual framework of the physics for biomedical challenges. Chapters will develop the conceptual framework of the physics for biomedical challenges. [...]  

Due March 2017
Monograph
2017. X, 122 p. 51 illus., 26 illus. in color. (Handbook of Modern Biophysics, Volume 5) Hardcover
€ (D) 96,29 | € (A) 98,99 | *CHF 99.00
€ 89,99 | £ 66,99
ISBN 978-1-4939-6711-7
Food Allergens

This volume provides a collection of methodologies for basic research, clinical diagnosis, and treatment pertaining to food allergens, including food allergen production, purification, characterization, detection, quantification, and bioinformatics approaches to modern food allergen studies. [...] 

Due March 2017
Contributed volume
2017. XVI, 250 p. 44 illus. in color. (Methods in Molecular Biology, Volume 1592) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00
ISBN 978-1-4939-6923-4

H. G. Mannherz, Ruhr-Universität Bochum, Bochum, Germany (Ed)

The Actin Cytoskeleton and Bacterial Infection

This volume describes the mechanisms which bacteria have created to secure their survival, proliferation and dissemination by subverting the actin cytoskeleton of host cells. Bacteria have developed a veritable arsenal of toxins, effector proteins and virulence factors that allow them to modify the properties of the intracellular actin cytoskeleton for their own purposes. Bacterial factors either modify actin directly as the main component of this part of the cytoskeleton or functionally subvert regulatory or signalling proteins terminating at the actin cytoskeleton. [...] 

Available
Contributed volume
2017. X, 242 p. (Current Topics in Microbiology and Immunology, Volume 399) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-50046-1

A. Lusser, Biocenter Innsbruck Medical University, Innsbruck, Austria (Ed)

RNA Methylation

This volume provides a comprehensive collection of current methods and protocols to study posttranscriptional base modifications in RNA with special focus on methylation. The protocols in this book discuss state-of-the-art methods for investigating aspects of RNA methylation on different types of RNA. The protocols cover topics such as wet-lab techniques for the detection of methylation, instructions for bioinformatics analyses of transcriptome-scale data, and protocols for the functional examination of RNA modifications and enzymes. [...] 

Due April 2017
Contributed volume
2017. IX, 279 p. 54 illus., 34 illus. in color. (Methods in Molecular Biology, Volume 1562) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00

S. M. Marcus, Rutgers, State University of New Jersey, Newark, NJ, USA

Medical Toxicology: Antidotes and Anecdotes

A collection of challenging and unusual cases from the author's extensive experience as a Medical Toxicologist, these cases demonstrate medical problem solving and differential diagnosis in action from the perspective of an experienced clinician. Written in an engaging style and giving a fascinating account of some complex cases from real practice, this book will provide a good supplementary learning text for graduate students or those at an early stage in their professional career. 

Due March 2017
Monograph
2017. XVII, 146 p. 4 illus. in color. Hardcover
€ (D) 32,09 | € (A) 32,99 | *CHF 33.00
€ 29,99 | £ 16,50
ISBN 978-3-319-51027-9

J. Michael, Rush Medical College, Chicago, IL, USA; W. Cliff, Niagara University, Lewiston, NY, USA; J. McFarland, Edmonds Community College, Lynnwood, WA, USA; H. Modell, Physiology Educational Research Consortium, Seattle, WA, USA; A. Wright, Formerly at Canisius College, Buffalo, NY, USA

The Core Concepts of Physiology

This book offers physiology teachers a new approach to teaching their subject that will lead to increased student understanding and retention of the most important ideas. By integrating the core concepts of physiology into individual courses and across the entire curriculum, it provides students with tools that will help them learn more easily and fully understand the physiology content they are asked to learn. [...] 

Due March 2017
Monograph
2017. XVI, 153 p. 9 illus., 4 illus. in color. Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-1-4939-6907-4
Experimental Medicine and Biology, Volume 2017. V, 184 p. 17 illus. in color. (Advances in Contributed volume Available

Due March 2017 Contributed volume 2017. XV, 489 p. 41 illus., 14 illus. in color. (Springer Handbook of Auditory Research, Volume 60) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121,00 € 109,99 | € 82,00 ISBN 978-3-319-51660-8

The Auditory System at the Cocktail Party

The Auditory System at the Cocktail Party is a rather whimsical title that points to the very serious challenge faced by listeners in most everyday environments: how to hear out sounds of interest amid a cacophony of competing sounds. The volume presents the mechanisms for bottom-up object formation and top-down object selection that the auditory system employs to meet that challenge. [...]

Due March 2017 Contributed volume 2017. XI, 202 p. 8 illus., 6 illus. in color. (Progress in Inflammation Research) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170,50 € 154,99 | £ 115,50 ISBN 978-3-319-42251-0

A. Naing. University of Texas, Houston, TX, USA; J. Hajjar. Baylor College of Medicine-Texas Children’s Hospital, Houston, TX, USA (Eds)

Immunotherapy

In the last decade, immunotherapy has revolutionized the practice of medicine in the field of oncology. This book, Immunotherapy, highlights the immunotherapeutic approaches currently in use and strategies to overcome the associated challenges. As comprehensive knowledge of basic immunology in the context of tumor biology is required to move further along the line of development in translational science, this book provides an overview of the cellular components of the immune system that interact with each other to provide a successful immune response. [...]

€ (D) 165,84 | € (A) 170,49 | *CHF 170,50 € 154,99 | £ 115,50 ISBN 978-3-319-53155-7

P. Mina-Osorio. Eli Lilly & Company, New York, NY, USA (Ed)

Next-Generation Therapies and Technologies for Immune-Mediated Inflammatory Diseases

As our understanding of immune mediated chronic inflammatory diseases (IMIDs) grows, it becomes more and more clear that these conditions result from the convergence of a multitude of pathogenic mechanisms whose relative individual contribution is different in different patient subsets. Promising new technologies have been conceived that address the hypotheses that targeting multiple pathways simultaneously, selectively delivering therapeutics to areas of inflammation and/or resetting the immune system, could take efficacy to new levels. [...]

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€ (D) 165,84 | € (A) 170,49 | *CHF 170,50 € 154,99 | £ 115,50 ISBN 978-3-319-48822-6

G. Neufeld. Israel Institute of Technology Technion, Haifa, Israel; O. Kessler. Israel Institute of Technology Technion, Haifa, Israel (Eds)

The Neuropilins: Role and Function in Health and Disease

This book covers basic research topics such as the structure-function relationships of neuropilins and mechanisms of neuropilin-mediated signal transduction, details the most important roles of the neuropilins in developmental biology, and addresses their roles in various conditions such as cancer and various eye diseases. The two neuropilin genes encode scaffold receptors that can bind several different ligands, and also associate with many other receptors and modify their activity. [...]

Available Contributed volume 2017. VIII, 364 p. 137 illus., 78 illus. in color. Hardcover
€ (D) 181,89 | € (A) 186,99 | *CHF 187,00 € 169,99 | £ 126,50 ISBN 978-4-431-56461-4

S. Nagata. Kyoto University Graduate School of Medicine, Kyoto, Japan; H. Nakano, Toho University School of Medicine, Tokyo, Japan (Eds)

Apoprotic and Non-apoptotic Cell Death

This volume focuses on apoptotic and non-apoptotic programmed cell death, including necroptosis, pyroptosis, and ferroptosis, and presents recent findings in the field. It discusses the crucial role that apoptotic and non-apoptotic cell death play in various pathological conditions, such as skin diseases, inflammatory bowel diseases, and virus infections. Further, it highlights the mechanisms underlying the recognition and clearance of dead cells, and the subsequent biological responses triggered by phagocytosed macrophages and factors released from dying cells. [...]

Due April 2017 Contributed volume 2017. 180 p. (Current Topics in Microbiology and Immunology, Volume 403) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170,50 € 154,99 | £ 115,50 ISBN 978-3-319-23912-5

Y. Ogra. Chiba University, Chiba-shi, Japan; T. Hirata. The University of Tokyo, Bunkyo-ku, Japan (Eds)

Metallomics

This book focuses on recent topics in metallomics, a study of the metallome, or metal-containing biomolecules. Metals can induce various physiological and toxicological effects in a very small amounts, in other words, the concentrations of biometals are very low in organisms. Thus, analytical techniques for a trace amount of metal are crucial to understand the biological and toxicological functions of metals. This volume begins with an overview of metallomics including the history and development of the field. Subsequent parts provide basic and advanced techniques for metallomics. [...]

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K. Okazaki, Kansai Medical University, Osaka, Japan (Ed)

IgG4-Related Disease
This volume focuses on IgG4-related disease (IgG4-RD), a novel clinical entity involving multiple organs and of unknown origin, associated with the abundant infiltration of IgG4-positive cells. It consists of nine chapters written by prominent experts in the field and discusses the disease concept, diagnosis and treatment, as well as recent findings on its pathogenesis and pathophysiology. As such, it offers an invaluable source of information for researchers and clinicians alike.

Due April 2017
Contributed volume
2017, 130 p. (Current Topics in Microbiology and Immunology, Volume 401) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 82,00
ISBN 978-3-319-52541-9

E. N. Pearce, Boston University School of Medicine, Boston, MA, USA (Ed)

Iodine Deficiency Disorders and Their Elimination
Iodine is an essential micronutrient and an integral component of the thyroid hormones, which are required for normal growth and development. The iodine deficiency disorders (IDD) encompass a spectrum of adverse health effects including goiter, cretinism, hypothyroidism, growth retardation, and increased pregnancy loss and infant mortality. This volume summarizes the current understanding of the effects of iodine deficiency as well as iodine excess. It also discusses best practices for salt iodization, the mainstay of global IDD prevention efforts, and other forms of food fortification. […]

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Contributed volume
2017, X, 158 p. 16 illus., 8 illus. in color. Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-52173-2

C. P. Page, King’s College London, London, UK; P. J. Barnes, National Heart and Lung Institute, London, UK (Eds)

Pharmacology and Therapeutics of Asthma and COPD
The present volume is supposed to be a major reference resource for chest physicians and those involved in the development of novel pharmaceutical entities for these diseases. Internationally recognized authorities review the most important new information on the advances in our understanding of the pathogenesis and treatment of these diseases, including the substantial advances in the topical delivery of inhaled medicines. […]

Available
Contributed volume
€ (D) 330,63 | € (A) 339,90 | *CHF 411.50
€ 309,00 | £ 278,50
ISBN 978-3-319-52173-2

G. E. Rainger, University of Birmingham College of Medicine & Dentistry, Birmingham, UK; H. M. Mcgettrick, University of Birmingham Institute of Inflammation and Ageing, Birmingham, UK (Eds)

T-Cell Trafficking
This second edition provides updated and new chapters on T-Cell trafficking. In addition to detailed experimental procedures, the interested reader will find informative introductory chapters on the relevance of T-Cell trafficking in thymic population and maturation, traffic through secondary lymphoid organs during ‘physiological’ resolving inflammation and during immune responses, as well as T-Cell trafficking in chronic inflammatory diseases. […]

Due April 2017
Contributed volume
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€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 82,00
ISBN 978-1-4939-6929-6

S. Dossena, Paracelsus Medical University Institute of Pharmacology and Toxicology, Salzburg, Austria; M. Paulmichl, Paracelsus Medical University Institut of Pharmacology and Toxicology, Salzburg, Austria (Eds)

The Role of Pendrin in Health and Disease
This book reviews the current state of knowledge on the genetics, molecular biology and physiology of pendrin, with a particular focus on pendrin dysfunction and the consequences for human health. Pendrin is a membrane transport protein expressed in the thyroid, inner ear, kidney and airways, and was recently found in a variety of other tissues and organs. Pendrin malfunction may cause a genetic disease called Pendred syndrome or non-syndromic deafness. The book provides a thorough description of the multifaceted role of pendrin in human health and disease. […]

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ISBN 978-3-319-43285-4

L. Rajendrakumar Singh, Dr. B. R. Ambedkar Center for Biomedical Research, New Delhi, India; T. A. Dar, Dept of Clinical Biochemistry University of Kashmir, Srinagar (Eds)

Cellular Osmolytes
This book provides essential information on improving protein folding/stability, which is a result of the balance between the intra-molecular interactions of protein functional groups and their interactions with the solvent environment. The protein folding solvent environment mainly consists of salts, small molecule compounds, metabolites, molecular chaperones and other chemical species. Therefore, subtle change in the composition of the environment will alter the protein folding process. […]

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€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-30645-6
S. Rashid, Jamia Hamdard, New Delhi

Cancer and Chemoprevention: An Overview

This book focuses on the most recent, relevant, comprehensive and significant advances in cancer and chemoprevention. It broadly discusses cancer, its hallmarks and classification, molecular mechanisms of outbreak, contributing factors, role of oxidative stress, inflammatory mediators and evading apoptosis, which leads to the progression of disease. [...] 

Due February 2017 Monograph
2017. X, 193 p. 19 illus., 13 illus. in color. Hardcover
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€ 154,99 | £ 115,50
ISBN 978-3-319-50172-7

S. Strack, University of Iowa, Iowa City, IA, USA; Y. M. Usachev, University of Iowa Carver College of Medicine, Iowa City, IA, USA (Eds)

Techniques to Investigate Mitochondrial Function in Neurons

This volume describes a broad spectrum of experimental approaches for investigating structure, function, and transport of neuronal mitochondria in health and disease. Most of these approaches were only recently developed and range from electron tomography-based 3D reconstruction of mitochondrial cristae to patch clamp recording from mitochondria in intact neurons. [...] 

Due March 2017 Contributed volume
2017. X, 290 p. 75 illus., 51 illus. in color. (Neuromethods, Volume 123) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00
ISBN 978-3-319-50519-0

H. J. Rideout, Biomedical Research Foundation of the Academy of Athens (BRFAA), Athens (Ed)

Leucine-Rich Repeat Kinase 2 (LRRK2)

This is the first book to assemble the leading researchers in the field of LRRK2 biology and neurology and provide a snapshot of the current state of knowledge, encompassing all major aspects of its function and dysfunction. The contributors are experts in cell biology and physiology, neurobiology, and medicinal chemistry, bringing a multidisciplinary perspective on the gene and its role in disease. The book covers the identification of LRRK2 as a major contributor to the pathogenesis of Parkinson’s Disease. [...] 

Due February 2017 Contributed volume
2017. XIV, 262 p. 16 illus., 15 illus. in color. (Advances in Neurobiology, Volume 14) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50
ISBN 978-3-319-49967-3

D. T. Stuart, University of Alberta, Edmonton, AB, Canada (Ed)

Meiosis

This updated book includes meiosis methods ranging from classical genetic approaches with budding yeast to high resolution microscopy and computational methods for the analysis of recombination and modeling gene expression networks. Cutting-edge procedures for the analysis of double strand breaks at single nucleotide resolution, analysis of translation by ribosome profiling, the use of fluorescent markers to analyze recombination, and strategies for the use of conditional expression to study chromatin protein dynamics are detailed. [...] 

Due June 2017 Contributed volume
2nd ed. 2017. XII, 468 p. 59 illus., 45 illus. in color. (Methods in Molecular Biology, Volume 1471) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 82,00
ISBN 978-1-4939-6338-6

S. B. Smith, Georgia Regents University, Augusta, GA, USA; T. Su, Cellular Pathobiology Section IRP, NIDA, NIH, DHHS, Baltimore, MD, USA (Eds)

Sigma Receptors: Their Role in Disease and as Therapeutic Targets

Originally confused with opioid receptors and then orphan receptors with no biological function, Sigma Receptors are now recognized as relevant to many degenerative diseases with remarkable potential as therapeutic targets. In this text, new information about the structure of sigma 1 receptor, its binding sites are provided as well as its expression in many cell types. [...] 

Due February 2017 Contributed volume
2017. X, 340 p. 58 illus., 45 illus. in color. (Advances in Experimental Medicine and Biology, Volume 964) Hardcover
€ (D) 181,89 | € (A) 186,99 | *CHF 187.00
€ 169,99 | £ 126,50
ISBN 978-3-319-50172-7

N. Tegtmeyer, S. Backert, Friedrich Alexander University Erlangen/Nuremberg, Erlangen, Germany (Eds)

Molecular Pathogenesis and Signal Transduction by Helicobacter pylori

This volume reviews the current state of research concerning bacterial virulence factors and the infection biology of Helicobacter pylori, which is the leading cause of peptic ulcers and gastric cancer worldwide. The chapters include cutting-edge findings on this fascinating microbe and discuss the general strategies of H. pylori infection and persistence, news on important H. pylori virulence factors, crosstalk with the microbiota, hot novel models and signaling mechanisms, risk factors of gastric disease and stomach cancer, and the impact of H. pylori infection on non-gastric diseases. [...] 

Available Contributed volume
2017. XXIV, 347 p. 33 illus., 31 illus. in color. (Current Topics in Microbiology and Immunology, Volume 400) Hardcover
€ (D) 181,89 | € (A) 186,99 | *CHF 187.00
€ 169,99 | £ 126,50
ISBN 978-3-319-50519-0
Non-coding RNAs in the Vasculature

This book focuses on the importance of regulatory RNAs in the vasculature. The main topics discussed include the role of regRNAs in vascular development and angiogenesis, ischemic cardiovascular disease and repair mechanisms, diabetic and metabolic vascular disease, atherosclerosis and vascular inflammation, as well as diagnostics of vascular disease using circulating miRNAs. Lastly, it offers an overview of emerging topics such as microvesicle-mediated miRNA cellular trafficking and the vascular importance of long non-coding RNAs. [...] Due March 2017

Available
2017. X, 326 p. 54 illus., 37 illus. in color. With online files/update. (Methods in Molecular Biology, Volume 1551) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 121.00
€ 94,99 | € 71,00

Synthetic Antibodies

This detailed volume presents a set of protocols useful for researchers in the field of recombinant immunoglobulin and alternative scaffold engineering, aptamer development, and generation of molecularly imprinted polymers (MIPs). Part I includes methods that deal with amino-acid based synthetic antibodies. Brief protocols about the generation of antibody libraries are detailed, as well as techniques for antibody selection, characterization, and validation. [...] Due February 2017

Available
2017. XI, 460 p. 98 illus., 73 illus. in color. (Methods in Molecular Biology, Volume 1575) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | € 82,00
ISBN 978-3-319-52943-1

Haplotyping

This volume details protocols for genetic, molecular, cytological, and bioinformatic methods for determining haplotypes. Haplotyping: Methods and Protocols guides readers through methods that directly type haploid cells, difficult-to-resolve gene families, high-resolution, short range haplotyping for targeted loci, and long-range haplotyping for whole chromosomes or genomes. [...] Available

2017. X, 94 p. 11 illus. (Cardiac and Vascular Biology) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | € 82,00
ISBN 978-3-319-52943-1

Modelling the Toxicity of Nanoparticles

In today’s nanotechnology and pharmaceutical research, alternative toxicology testing methods are crucial for ethically and commercially sound practice. This book provides practical guidelines on how to develop and validate quantitative nanostructure-toxicity relationship (QNTR) models, which are ideal for rapidly exploring the effects of a large number of variables in complex scenarios. [...] Available

2017. XVII, 352 p. 102 illus., 83 illus. in color. (Advances in Experimental Medicine and Biology, Volume 947) Hardcover
€ (D) 181,89 | € (A) 186,99 | *CHF 187.00
€ 169,99 | € 126,50
ISBN 978-3-319-47752-7

Bone Morphogenetic Proteins: Systems Biology Regulators

This book focuses on the salient features of the biology of Bone Morphogenetic Proteins and the advances in our understanding of their structure and function and of downstream signaling, as well as their governance in systems biology from bone and dentin to kidney, cancer, diabetes, iron homeostasis and angiogenesis, including rare musculoskeletal disorders. [...] Due December 2016

Available
2017. X, 486 p. 43 illus., 32 illus. in color. (Progress in Inflammation Research) Hardcover
€ (D) 181,89 | € (A) 186,99 | *CHF 187.00
€ 169,99 | € 126,50
ISBN 978-3-319-47752-7
Y. Wang. Institute of Neuroscience Chinese Academy of Sciences, Shanghai, China (Ed)

**Transient Receptor Potential Canonical Classical Channels and Brain Diseases**

This book discusses the latest findings on the physiologial and pathological functions of transient receptor potential canonical/classical (TRPC) proteins in the brain. In addition to reviewing the functions of TRPCs in brain development and neuron transmission, it mainly covers the potential roles of TRPCs in brain disorders. TRPC proteins belong to the TRP channel superfamily, which has around 30 members. Just like TRP channels, TRPCs are non-selectively permeable to cations, with a selectivity of calcium over sodium that varies among different members. [...]**Due March 2017**

Monograph
2017. X, 210 p. 16 illus., 15 illus. in color. (Advances in Experimental Medicine and Biology, Volume 976) Hardcover
€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 165,00
ISBN 978-94-024-1086-0

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A. R. White. University of Melbourne, Melbourne, VIC, Australia (Ed)

**Metals in the Brain**

This volume explores methods used to examine metal levels and distribution in brain tissue or brain-derived cells. The chapters in this book discuss the use of fluorescent metal probes, synchrotron-based X-ray microscopy, ICP-MS, laser ablation-ICP-MS, laser-based tissue microdissection, MRI image analysis, fractionation of cell tissue samples for metal analysis, and metal treatment of cells. In Neur methods series style, chapters include the kind of detail and key advice from the specialists needed to get successful results in your own laboratory. [...]**Due March 2017**

Contributed volume
2017. VIII, 324 p. 63 illus., 32 illus. in color. (Neur methods, Volume 124) Hardcover
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 117,00
ISBN 978-1-4939-6916-6

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D. W. Abbott. Agriculture and Agri-Food Canada, Lethbridge, AB, Canada; A. Lammerts van Bueren. University of Groningen, Groningen (Eds)

**Protein–Carbohydrate Interactions**

This volume is a wide-ranging tool for studying protein-carbohydrate interactions that extend from traditional biochemical methods to state-of-the-art techniques. This book focuses on four different research themes: Part I describes methods for screening and quantifying CAZyme activity; Part II contains methods for investigating the interactions between proteins and carbohydrate ligands; Part III discusses methods for the visualization of carbohydrates and protein–carbohydrate complexes; and Part IV focuses on structural and “omic” approaches for studying systems of CAZymes. [...]**Due March 2017**

Contributed volume
2017. VIII, 369 p. 52 illus., 32 illus. in color. (Methods in Molecular Biology, Volume 1588) Hardcover
€ (D) 101,64 | € (A) 104,49 | *CHF 107.50
€ 94,99 | £ 105,00

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U. P. Albuquerque, M. A. Ramos. Universidade de Pernambuco, Recife, Brazil; W. S. Ferreira Júnior. Universidade de Pernambuco, Petrolina, Brazil; P. M. de Medeiros. Universidade Federal de Alagoas, Maceió, Brazil

**Ethnobotany for Beginners**

Designed for new scholars, this book features a quick and easy-to-read discussion of ethnobotany along with its major developments. The language is clear and concise, objective and straightforward, and structured to lead the reader from the beginning of this science to the most recent developments. While there are some books on ethnobotany, mainly dealing with methods, this book covers the topic in an introductory and comprehensive text that prepares the reader for more advanced study of ethnobotany. [...]**Due February 2017**

Contributed volume
2017. X, 292 p. 37 illus., 34 illus. in color. (Results and Problems in Cell Differentiation, Volume 59) Hardcover
€ (D) 144,44 | € (A) 148,49 | *CHF 148.50
€ 134,99 | £ 150,00
ISBN 978-3-319-44819-0

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R. Zeineldin. Mount Ida College, Newton, MA, USA (Ed)

**Cancer Nanotechnology**

This detailed volume presents protocols for advancing the utility of nanotechnology in cancer research toward improving our understanding of cancer biology, prevention, diagnosis, and therapy. [...]**Available**

Contributed volume
2017. XIV, 414 p. 100 illus., 77 illus. in color. (Methods in Molecular Biology, Volume 1530) Hardcover
€ (D) 171,69 | € (A) 179,99 | *CHF 184.00
€ 159,99 | £ 175,00
ISBN 978-1-4939-6644-8
**Protein Reviews**

The aim of the Protein Reviews is to serve as a publication vehicle for review articles that focus on crucial current vigorous aspects of protein structure, function, evolution and genetics. Volume 17 of Protein Reviews is the beginning of a new publication format. The volumes will appear online before they are published in a printed book. Articles will be selected according to their importance to the understanding of biological systems, their relevance to the unravelling of issues associated with health and disease or their impact on scientific or technological advances and developments. [...]  

**Due March 2017**  
Contributed volume

2017. Approx. 150 p. (Advances in Experimental Medicine and Biology, Volume 925)  
Hardcover  
€ (D) 117,69 | € (A) 120,99 | *CHF 148,50  
€ 109,99 | £ 82,00  
ISBN 978-94-024-1015-0

**Advances of Basic Science for Second Generation Bioethanol from Sugarcane**

This book focuses on the basic science recently produced in Brazil for the improvement of sugarcane as a bioenergy crop and as a raw material for 2nd generation bioethanol production. It reports achievements that have been advancing the science of cell walls, enzymes, genetics, and sustainability related to sugarcane technologies and give continuity to the research reported in the “Routes to Cellulosic Ethanol”, from Springer. [...]  

**Due February 2017**  
Contributed volume

Hardcover  
€ (D) 144,44 | € (A) 148,49 | *CHF 184,50  
€ 134,99 | £ 100,50  
ISBN 978-3-319-49824-9

**Sustainable Development and Tropical Agri-chains**

This book links tropical agri-chain dynamics – with which CIRAD and AFD have been involved for decades – to that of sustainable development. Increased environmental and social concerns urge agri-chain actors and development practitioners to design innovations, and public and private actors to invent regulations in connection with agri-chains to improve sustainability. [...]  

**Due March 2017**  
Contributed volume

2017. XXVIII, 353 p. 35 illus., 28 illus. in color.  
Hardcover  
€ (D) 144,44 | € (A) 148,49 | *CHF 184,50  
€ 134,99 | £ 100,50  
ISBN 978-94-024-1015-0

**Managing Forest Ecosystems: The Challenge of Climate Change**

Climate change shaped the political agenda during the last decade with three issues as hot topics: commonly making the headlines: carbon budgets, impact and mitigation of climate change. Given the significant role that forests play in the climate system – as sources, sinks, and through carbon trading – this book update the current scientific evidences on the relationships between climate, forest resources and forest management practices around the world. [...]  

**Due December 2016**  
Contributed volume

2nd ed. 2017. X, 402 p. 90 illus., 49 illus. in color. (Managing Forest Ecosystems, Volume 34)  
Hardcover  
€ (D) 167,98 | € (A) 172,69 | *CHF 172,50  
€ 156,99 | £ 113,30  
ISBN 978-3-319-28248-0

**Plant Aquaporins**

Aquaporins are channel proteins that facilitate the diffusion of water and small uncharged solutes across cellular membranes. Plant aquaporins form a large family of highly divergent proteins that are involved in many different physiological processes. This book will summarize the recent advances regarding plant aquaporins, their phylogeny, structure, substrate specificity, mechanisms of regulation and roles in various important physiological processes related to the control of water flow and small solute distribution at the cell, tissue and plant level in an ever-changing environment. [...]  

**Available**  
Contributed volume

2017. VIII, 353 p. 30 illus., 29 illus. in color. (Signalling and Communication in Plants)  
Hardcover  
€ (D) 277,13 | € (A) 284,90 | *CHF 284,50  
€ 259,00 | £ 193,00  
ISBN 978-3-319-49393-0

M. Z. Atassi, Baylor College of Medicine, Houston, TX (Ed)

E. Biénabe, CIRAD – UMR Innovation, Montpellier, France; A. Rival, CIRAD, DGD-RS, Jakarta, Indonesia; D. Loeillet, CIRAD – UPR Gec, Montpellier, France (Eds)

N. A. Burgess-Brown, University of Oxford, Oxford, UK (Ed)

F. Bravo, Universidad Valladolid Inst. Nacional de Investigação Agrária, Palencia, Spain; V. LeMay, University of British Columbia Dept. Forest Resources Management, Vancouver, BC, Canada; R. Jandl, BFW, Vienna, Austria (Eds)

F. Chaumont, Université catholique de Louvain, Louvain-la-Neuve, Belgium; S. D. Tyerman, University of Adelaide, Adelaide, Australia (Eds)
Microbial Ecology of Extreme Environments

This book explores microbial lifestyles, biochemical adaptations, and trophic interactions occurring in extreme environments. By summarizing the latest findings in the field, it provides a valuable reference for future studies. Spark ideas for biotechnological and commercial exploitation of microorganisms at the extremes of life are presented. Chapters on viruses complement this highly informative book. In a vertical journey through the microbial biosphere, it covers aspects of cold environments, hot environments, extreme saline environments, and extreme pressure environments, and more. [...] Due March 2017

Contributed volume

2017. XV, 245 p. 17 illus. Hardcover

€ (D) 144.44 | € (A) 148.49 | *CHF 148.50 € 134.99 | £ 100,50
ISBN 978-3-319-51684-4

Applied Genomics of Foodborne Pathogens

This book provides a timely and thorough snapshot into the emerging and fast-evolving area of applied genomics of foodborne pathogens. Driven by the drastic advance of whole genome shotgun sequencing (WGS) technologies, genomics applications are becoming increasingly valuable and even essential in studying, surveying and controlling foodborne microbial pathogens. [...] Available

Monograph

2017. XI, 205 p. 28 illus., 8 illus. in color. (Food Microbiology and Food Safety) Hardcover

€ (D) 123.04 | € (A) 126.49 | *CHF 126.50 € 114,99 | £ 86,00
ISBN 978-3-319-43749-1

Stem Cell Banking

This volume covers protocols related to both pluripotent and somatic stem cells, including the ethical procurement of tissues and cells for the provision of “seed stock,” standardized methods for deriving hESCs and iPSCs, isolating mesenchymal stem cells, cell culture and cryopreservation, in addition to quality assurance and information management. Stem Cell Banking: Concepts and Protocols aims to contribute to the development of this field by providing information that is essential to establishing a bona fide stem cell bank. [...] Due March 2017

Contributed volume

2017. VIII, 247 p. 18 illus., 8 illus. in color. (Methods in Molecular Biology, Volume 1590) Hardcover

€ (D) 101,64 | € (A) 104,49 | *CHF 104.50 € 94,99 | £ 71,00

Grapevine Yellows Diseases and Their Phytoplasma Agents

This work is to compile our current knowledge on GY phytoplasma biology at the genomic, transcriptomic, proteomic and metabolomics level, as well as to summarize the approaches for their detection. Phytoplasma are the most poorly characterized plant pathogenic bacteria from the Mollicutes class. In recent years, new biostatistics and bioinformatic approaches have improved our understanding of their biology and interactions with host grapevines and a great improvement has been made toward their molecular detection, both in laboratories and on-site. [...] Due March 2017

Brief

2017. IX, 99 p. 10 illus., 5 illus. in color. (SpringerBriefs in Agriculture) Softcover

€ (D) 53,49 | € (A) 54,99 | *CHF 55.00 € 49,99 | £ 37,99
ISBN 978-3-319-50647-0

Scientific Scholarly Communication

This book critically examines the historical developments and current trends in the scientific scholarly communication system, issues and challenges in scientific scholarly publishing and scientific data sharing, implications and debates associated with the influence of intellectual property rights on scientific information sharing, and new trends related to peer reviewing and measuring the impact of scientific publications. [...] Due February 2017

Monograph

2017. X, 140 p. 2 illus. in color. (Fascinating Life Sciences) Hardcover

€ (D) 58,84 | € (A) 60,49 | *CHF 60.50 € 54,99 | £ 40,99
ISBN 978-3-319-50626-5

Adult Stem Cells

This volume contains a collection of protocols from some of the major laboratories involved in stem cell research across the world. The research discussed in this book covers topics such as: isolating, characterizing and expanding dental pulp stem cells; manipulating the proliferative potential of stromal stem cells from adipose tissue; non-invasive assessment of cell fat and biology in transplanted mesenchymal stem cells; and cell-free therapy for organ repair. [...] Due January 2017

Contributed volume

2017. XII, 324 p. 63 illus., 54 illus. in color. (Methods in Molecular Biology, Volume 1553) Hardcover

€ (D) 117,69 | € (A) 120,99 | *CHF 121.00 € 109,99 | £ 82,00
ISBN 978-1-4939-6754-4

C. Chénard, Nanyang Technological Univ., Singapore, Singapore; F. M. Lauro, Nanyang Technological Univ., Singapore, Singapore (Eds)

J. M. Crook, University of Melbourne, Melbourne, NSW, Australia; T. E. Ludwig, WiCell Research Institute, Madison, WI, USA (Eds)

P. U. K. De Silva, St. Louis, MO, USA; C. K. Vance, Murray State University, Murray, KY, USA

X. Deng, University of Georgia, Griffin, GA, USA; H. C. den Bakker, Texas Tech University, Lubbock, TX, USA; R. S. Hendriksen, Technical University of Denmark, Copenhagen (Eds)

M. Dermastia, A. Bertaccini, F. Constable, N. Mehle

P. Di Nardo, Università di Roma Tor Vergata, Roma, Italy; S. Dhingra, University of Manitoba, Winnipeg, MB, Canada; D. K. Singla, UCF College of Medicine, Orlando, FL, USA (Eds)

M. Dermastia, A. Bertaccini, F. Constable, N. Mehle

P. Di Nardo, Università di Roma Tor Vergata, Roma, Italy; S. Dhingra, University of Manitoba, Winnipeg, MB, Canada; D. K. Singla, UCF College of Medicine, Orlando, FL, USA (Eds)
**Matrix Metalloproteases**

Since the identification of the first matrix metalloprotease (interstitial collagenase or MMP-1) more than 20 closely related and evolutionarily conserved vertebrate MMPs have been discovered. [...]  

**Due February 2017**  
Contributed volume  
2017. X, 346 p. 56 illus., 34 illus. in color. (Methods in Molecular Biology, Volume 1579) Hardcover  
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00  
€ 109,99 | £ 82,00  

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**Cholesterol Homeostasis**

This volume provides state-of-the-art techniques for studying various aspects of cholesterol homeostasis, including its uptake, synthesis and efflux from the cell, as well as its trafficking within the cell. Chapters also cover techniques for studying the regulation of cholesterol homeostasis at both the transcriptional and post-translational levels, as well as studying the membrane topology and structure of cholesterol-related proteins. [...]  

**Available**  
Contributed volume  
2017. X, 272 p. 38 illus., 25 illus. in color. (Methods in Molecular Biology, Volume 1536) Hardcover  
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50  
€ 94,99 | £ 71,00  
ISBN 978-1-4939-6880-6

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**Oat**

The volume provides detailed protocols that have been developed or modified exclusively for the study of oat. The topics discussed in this book are a selection of various molecular biology and biotechnology methods, such as the application of molecular markers for polymorphism analyses and cytological manipulations, the production of synthetic polyploids, and in vitro cultures and genetic modifications. [...]  

**Available**  
Contributed volume  
2017. X, 272 p. 38 illus., 25 illus. in color. (Methods in Molecular Biology, Volume 1536) Hardcover  
€ (D) 101,64 | € (A) 104,49 | *CHF 104.50  
€ 94,99 | £ 71,00  
ISBN 978-1-4939-6680-6

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**Th9 Cells**

This volume presents comprehensive laboratory protocols that have been used to generate Th9 cells, both in vitro and in vivo. The techniques described in Th9 Cells: Methods and Protocols study the role of Th9 cells in different inflammatory disease models, including allergic inflammation model, parasite model, tumor model, and EAE and IBD model. [...]  

**Due February 2017**  
Contributed volume  
2017. VI, 390 p. 29 illus., 15 illus. in color. (Methods in Molecular Biology, Volume 1585) Hardcover  
€ (D) 117,69 | € (A) 120,99 | *CHF 121.00  
€ 109,99 | £ 82,00  

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**Stem Surface Area in Modeling of Forest Stands**

This book reveals the benefits of describing and modeling trees as the combined surface areas of their stems, and provides a concise overview of the fundamental grounds for adopting such an approach. Anatomically speaking, trees are largely thin sheaths of living cells and it is this understanding that has sparked growing interest in the study of stem surface areas in trees and stands. An overview of publications on analytical methods for the dynamics and structure of forest stands based on stem surface area is also provided. [...]  

**Due March 2017**  
Brief  
2017. XI, 103 p. 1 illus. (SpringerBriefs in Plant Science) Softcover  
€ (D) 53,49 | € (A) 54,99 | *CHF 55.00  
€ 49,99 | £ 37,99  
ISBN 978-3-319-52448-1

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**Nanoscience and Plant–Soil Systems**

This book provides in-depth reviews of the effects of nanoparticles on the soil environment, their interactions with plants and also their potential applications as nanofertilizers and pesticides. It offers insights into the current trends and future prospects of nanotechnology, including the benefits and risks and the impact on agriculture and soil ecosystems. [...]  

**Available**  
Contributed volume  
2017. XIII, 553 p. (Soil Biology, Volume 48) Hardcover  
€ (D) 144,44 | € (A) 148,49 | *CHF 148.50  
€ 134,99 | £ 100,50  
ISBN 978-3-319-46833-4
**Across the Alps in Prehistory**

At the heart of this book is the matter of how isotopic landscapes combined with data mining enriches insights on prehistoric migration and cultural transfer. Isotopic mapping is an indispensable tool for the assessment of mobility and trade in the past, but is limited by eco-geographic redundancies. [...]  

**Dued December 2016**  
Contributed volume  
2017. Approx. 250 p. 45 illus. Hardcover  
€ (D) 144,44 | € (A) 148,49 | *CHF 148.50  
€ 134,99 | £ 100,50  
ISBN 978-3-319-41548-2

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**Manipulation of Allelopathic Crops for Weed Control**

This book clearly defines ways to maximize the allelopathic potential of important field crops for controlling weeds, either in the same crop or others. Compared to the use of herbicides, allelopathy is an attractive option to control weeds naturally under field conditions. The book highlights the allelopathic potential of several important cereals (wheat, maize, rice, barley, sorghum, rye) and two oilseed crops (sunflower and canola (as well as some other member of Brassicaceae family)). [...]  

**Dued March 2017**  
Monograph  
Softcover  
€ (D) 53,49 | € (A) 54,99 | *CHF 55.00  
€ 49,99 | £ 37,99  
ISBN 978-3-319-53185-4

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**Ecology of Meromictic Lakes**

This volume presents recent advances in the research on meromictic lakes and a state-of-the-art overview of this area. After an introduction to the terminology and geographic distribution of meromictic lakes, three concise chapters describe their physical, chemical and biological features. The following eight chapters present case studies of more than a dozen meromictic lakes, showing the variety of physical and biochemical processes that promote meromixis. [...]  

**Dued January 2017**  
Contributed volume  
2017. X, 434 p. 91 illus., 27 illus. in color. (Ecological Studies, Volume 228) Hardcover  
€ (D) 181,89 | € (A) 186,99 | *CHF 187.00  
€ 169,99 | £ 126,50  
ISBN 978-3-319-49141-7

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**Bacteriophages: Practical Applications for Nature’s Biocontrol**

Bacteriophages: Practical Applications for Nature’s Biocontrol presents the latest information on uses in healthcare settings as well as animal husbandry, management and care of farm animals by using enhanced phages to replace antibiotics for growth promotion in animal feed or to prevent, control and treat disease in animals. The book will provide an overview of the function of phages and what researchers need to know, from phage hunting to laboratory design, management, production and application using different tools and methods. [...]  

**Dued March 2017**  
Contributed volume  
2017. X, 230 p. 24 illus., 22 illus. in color. Hardcover  
€ (D) 144,44 | € (A) 148,49 | *CHF 148.50  
€ 134,99 | £ 100,50  
ISBN 978-3-319-47005-4
**Cover Crops for Sustainable Farming**

This study, based on a literature review and simulations, shows the efficiency of cover crops at catching nitrate in most agriculture situations. It also analyzes both the negative impacts they can have and the ecosystem services they can provide. The introduction of a cover crop between two main crops helps catch the soil mineral nitrogen before the period of drainage and consequently reduces nitrate leaching and nitrate concentration in the drainage water. [...] 

**Due January 2017**

Monograph

2017. X, 141 p. 34 illus., 32 illus. in color. Hardcover

€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 82,00

ISBN 978-94-024-0985-7

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**Cartilage Regeneration**

This book focuses on cartilage defects and new mesenchymal stem cell-based treatments for their repair and regeneration. Early chapters provide a review of current etiologival findings and repair methods of cartilage defects. The next chapters discuss fundamental concepts and features of MSCs, including their proliferation, differentiation, migration and immunomodulatory effects. The discussion also includes clinical applications of MSCs in cartilage tissues, especially with regards to various animal models, biomaterials and transferring techniques. [...] 

**Due March 2017**

Contributed volume

2017. XXIV, 662 p. 129 illus., 82 illus. in color. Hardcover

€ (D) 245,03 | € (A) 251,90 | *CHF 251.50
€ 229,00 | £ 170,50

ISBN 978-81-322-3686-3

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**Biological Timekeeping: Clocks, Rhythms and Behaviour**

This book is a concise, comprehensive and up-to-date account of fundamental concepts and potential applications of biological timekeeping mechanisms in animals and humans. It also discusses significant aspects of the organization and importance of timekeeping mechanisms in both groups. Divided into seven sections, it addresses important aspects including fundamental concepts; animal and human clocks; clock interactions; clocks and metabolism and immune functions; pineal, melatonin and timekeeping; and clocks, photoperiodism and seasonal behaviours. [...] 

**Due March 2017**

Contributed volume

2017. XV, 97 p. (Stem Cell Biology and Regeneration) Hardcover

€ (D) 117,69 | € (A) 120,99 | *CHF 121.00
€ 109,99 | £ 82,00

ISBN 978-3-319-51616-5

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**The Role of Heat Shock Proteins in Reproductive System Development and Function**

Due to the paucity of reviews on this subject, this volume aims to be timely and promote additional basic and translational research on these proteins in reproductive system development and function within the fields of Anatomy, Embryology and Cell Biology. [...] 

**Due March 2017**

Contributed volume

2017. X, 162 p. 19 illus., 14 illus. in color. (Advances in Anatomy, Embryology and Cell Biology, Volume 222) Softcover

€ (D) 165,84 | € (A) 170,49 | *CHF 170.50
€ 154,99 | £ 115,50

ISBN 978-3-319-51408-6

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**Hydrocarbon and Lipid Microbiology Protocols**

This Volume describes methods for cultivating hydrocarbon-producing and -consuming microbes, covering compounds in a range of states – gaseous (e.g. methane), liquid (e.g. alkanes of intermediate molecular weight) and solid (e.g. many PAHs and asphaltene). It also examines the cultivation of aerobic and anaerobic hydrocarbon degraders using a range of electron acceptors (e.g. oxygen, nitrate, sulphate, metals, (per)chlorate), and a separate chapter is devoted to explaining the cultivation of methanogens. [...] 

**Due February 2017**

Contributed volume

2017. X, 317 p. 50 illus., 20 illus. in color. (Springer Protocols Handbooks) Hardcover

€ (D) 104,50 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00

ISBN 978-3-662-45178-6

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**CD95**

This volume provides the most commonly used methods and protocols to study the apoptotic and non-apoptotic roles of CD95. Chapters explore molecular, biochemical, cellular methods and animal models to in order to better understand the biological functions of this cytokine. 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. [...] 

**Due January 2017**

Contributed volume

2017. XI, 230 p. 63 illus., 38 illus. in color. (Methods in Molecular Biology, Volume 1557) Hardcover

€ (D) 101,64 | € (A) 104,49 | *CHF 104.50
€ 94,99 | £ 71,00

ISBN 978-1-4939-6778-0

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**V. Kumar, University of Delhi, Delhi, India (Ed)**

**P. Legembre, Universite de Rennes CLCC Eugene Marquis, RENNES, France (Ed)**

**Y. Lin, West China Hospital of Stomatology, Sichuan University, Chengdu, China (Ed)**

**D. MacPhee, University of Saskatchewan Dept. of Veterinary Biomed. Sciences, Saskatoon, SK (Ed)**

**T. J. McGenity, University of Essex, Colchester, UK; K. N. Timmis, Technical University Braunschweig, Braunschweig, Germany; B. Nogales, University of the Balearic Islands and Mediterranean Institute for Advanced Studies (IMEDEA, UIB-CSIC), Palma de Mallorca, Spain (Eds)**

**B. Nogales, University of the Balearic Islands and Mediterranean Institute for Advanced Studies (IMEDEA, UIB-CSIC), Palma de Mallorca, Spain (Eds)**

**K. N. Timmis, Technical University Braunschweig, Braunschweig, Germany**

**T. J. McGenity, University of Essex, Colchester, UK**
**Kidney Development and Disease**

Kidney Development and Disease brings together established and young investigators who are leading authorities in nephrology to describe recent advances in three primary areas of research. The first section describes the use of animal models as powerful tools for the discovery of numerous molecular mechanisms regulating kidney development. The second section focuses on nephric cell renewal and differentiation, which lead to diverse cell fates within the developing kidney, and discusses diseases resulting from the aberrant regulation of the balance between cell fate decisions. [...]**

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**Mitochondria**

This volume compiles a broad range of step-by-step protocols, complementary to the ones published in the first edition of this book, to study various aspects of mitochondrial structure and function in different model organisms, both in vitro and in vivo. 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, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. [...]**

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ISBN 978-1-4939-6822-0

**F. Morelli**, Czech University of Life Sciences Prague, Kamýcká 129, Czech Republic; **P. Tryjanowski**, Poznań University of Life Sciences, Poznań, Poland (Eds)

**Birds as Useful Indicators of High Nature Value Farmlands**

This book helps to establish a simple framework to identify and use bird species as a bioindicator for high nature value (HNV) farmlands. This book focuses on suitable methods for monitoring the HNV areas, and presents the results of several case studies. The chapters put forward ways to integrate ecosystems assessment, geographical information systems (GIS) and strategies for conservation of local biodiversity. An innovative framework focuses on the use of species distribution models (SDMs) in order to explore the importance of each characteristic of HNV farmlands. [...]**

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**H. M. Moulton**, Oregon State Univ, Corvallis, OR, USA; **J. D. Moulton**, Gene Tools, LLC, Philomath, OR, USA (Eds)

**Morpholino Oligomers**

This volume presents a historical perspective on Morpholinos, an overview of good Morpholino practices, techniques for controlling Morpholino activity with light, techniques for modulating microRNA activity in zebrafish embryos, probing genes during fin regeneration, methods for determining to structure of gene networks during development, electroporation, bacterial knockdowns, pretargeting, diagnostic applications of Morpholinos, techniques for delivering Morpholinos in utero to developing embryos, and methods offering rapid, hands-free, label-free and inexpensive assays of [...]**

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€ 94,99 | £ 71,00

**D. Mokranjac**, University of Munich Institute for Physiological Chemistry, Munich, Germany; **F. Perocchi**, LMU Munich Gene Center Munich, Munich, Germany (Eds)

**T. Minamino**, Osaka University, Suita; **K. Namba**, Osaka University, Osaka (Eds)

**The Bacterial Flagellum**

This volume examines the structure and dynamics of the bacterial flagellum using bacterial genetics, molecular biology, biochemistry, structural biology, biophysics, cell biology, and molecular dynamics simulation. [...]**

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**T. J. McGenity**, University of Essex, Colchester, UK; **K. N. Timmis**, Braunschweig, Germany; **R. K. Miller**, The University of Texas Health Science Center at Houston, Houston, TX, USA (Ed)

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**T. J. McGenity**, University of Essex, Colchester, UK; **K. N. Timmis**, Braunschweig, Germany; **B. Nogales**, University of the Balearic Islands and Mediterranean, Palma de Mallorca, Spain (Eds)
Blue Biotechnology
This book describes the discovery of molecules from unexploited extreme marine environments, and presents new approaches in marine genomics. It combines the current state of knowledge in marine genomics and advanced natural products’ chemistry to pursue the sustainable production of novel secondary metabolites (lead compounds), as well as pharmacologically active peptides/proteins, with antimicrobial, neuroprotective, anti-osteoporotic, anti/protozoan/antiplasmodial, anti-ageing and immune-modulating effects. [...] 

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ISBN 978-3-319-51282-2

Ecology and Conservation of Birds in Urban Environments
This book provides syntheses of ecological theories and overarching patterns of urban bird ecology that have only recently become available. The numerous habitats represented in this book ranges from rows of trees in wooded alleys, to wastelands and remnants of natural habitats encapsulated in the urban matrix. [...] 

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Lysosomes
This volume provides laboratory protocols essential for studies on lysosomal biology. Chapters aim to guide researchers in their exploration of lysosomes, both under normal conditions and in pathological processes. 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. [...] 

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Industrial Entomology
This book is a compilation of writings focused on conventional and unconventional insect products. Some of these products are commercials successes, while others are waiting to be launched and are the potential produce of the future. In addition to the well known products honey, mulberry silk, and lac, the book primarily concentrates on silk producing insects other than the mulberry silkworm, insects as food, as sources of medicines, pest and weed managers, and as pollinators. The book highlights the all pervasive role of insects in improving human lives at multiple levels. [...] 

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**Imaging in Stem Cell Transplant and Cell-based Therapy**

This book provides a review of imaging techniques and applications in stem cell transplantation and other cell-based therapies. The basis of different molecular imaging techniques is explained in detail, as is the current state of interventional radiology techniques. While the whole is a comprehensive discussion, each chapter is self-sufficient enough so that each can be reviewed independently. The contributors represent years of international and cross-disciplinary expertise and perspective and are all well known in their fields. [...] **Due March 2017**

**Chromatin Architecture**

This book sheds new light on the current state of knowledge concerning chromatin organization. Particular emphasis is given to the new imaging potential offered by super-resolution microscopy, which allows DNA imaging with a very high labeling density. From the early work on chromosomes by Walther Flemming in the nineteenth century to recent advances in genomics, the history of chromatin research now spans more than a century. [...] **Due March 2017**

**Candida albicans: Cellular and Molecular Biology**

This book on Candida albicans and similar pathogens provides a timely overview of the groundbreaking discoveries made in the areas of drug resistance, host–pathogen interactions, virulence, host immune system modulation, etc., in the last two decades. [...] **Available**

**Nanoscience in Food and Agriculture 4**

In this book we present ten chapters describing the synthesis and application of nanomaterials for health, food, agriculture and bioremediation. Nanomaterials, with unique properties are now being used to improve food and agricultural production. Research on nanomaterials is indeed revealing new applications that were once thought to be imaginary. Specifically, applications lead to higher crop productivity with nanofertilisers, better packaging, longer food shelf life and better sensing of aromas and contaminants. [...] **Due March 2017**
Stem Anatomy of Dalbergia and Diospyros Species from Madagascar

This atlas offers anatomical descriptions of 19 Dalbergia and 31 Diospyros species, most of them endemic to Madagascar. Each species is illustrated with color micrographs of double-stained sections through the xylem, bark, and pith of stems, branches, and twigs. Further, a photograph of each plant and information on its height, DBH, habit, and geographical and elevational distribution in Madagascar are included. Dalbergia and Diospyros species provide highly-priced woods, which are intensively traded across the world and therefore highly endangered by illegal trade and harvesting. [...] 

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Fish on the Move

This book analyses the relation between different discourses and actors through an ethnographic approach, showing not only how fishermen in Slovenia respond to international political economy, how they struggle to survive but also how they generate small changes. Fishing in the northeastern part of the Adriatic Sea makes for a substantial economy anchored in many stories. [...] 

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Protein Terminal Profiling

This volume presents detailed protocols for novel strategies and approaches to improve functional understanding of protein N- and C-terminal biology. Protein Terminal Profiling: Methods and Protocols addresses topics such as protease specificity profiling, N-terminal acetylation, assays to probe protease activity in cellular systems, protein N- and C-termini on a proteome-wide scale, and activity in cellular systems, protein N- and C-terminal biology. Protein Terminal Profiling: Methods and Protocols addresses topics such as protease specificity profiling, N-terminal acetylation, assays to probe protease activity in cellular systems, protein N- and C-termini on a proteome-wide scale, and activity in cellular systems, protein N- and C-terminal biology. [...]

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Brassinosteroids

This detailed volume compiles state-of-the-art methodologies for the study of brassinosteroid hormones, contributed by recognized researchers in the field, in order to bring together different experimental and theoretical biology techniques for addressing the questions of how brassinosteroids function in Arabidopsis and other agriculturally valuable species, such as rice and sorghum. [...] 

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Plant Tolerance to Individual and Concurrent Stresses

This book focuses on multiple plant stresses and the molecular basis of adaptation, addressing the molecular mechanism and adaptation for both abiotic and biotic stresses. Ensuring the yield of crop plants grown under multiple individual and/or combined stresses is essential to sustaining productivity. In this regard, the development of broad-spectrum stress-tolerant plants is important. [...] 

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Plant Pattern Recognition Receptors

This volume covers protocols on techniques ranging from MAMP isolations from diverse microorganisms, PRR identifications from different plant species, MAMP-PRR binding, and a series of signaling responses and events revealed by various biochemical, cellular, genetic and bioinformatic tools. 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. [...] Due March 2017
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Telomeres and Telomerase

This third edition volume expands on the previous editions with new and improved assays that ask essential questions of telomere regulation in diverse model systems. The chapters in this book discuss genetic, proteomic, genomic, biochemical, and molecular approaches that provide insight into the complex protein interaction networks active in the telomere chromatin. This book also details information regarding telomere chromatin. Focusing on the role of these highly specialized microorganisms, it provides clean rooms for spacecraft assembly into the complex protein interaction networks active in the telomere chromatin. This book also details information regarding telomere chromatin. Focusing on the role of these highly specialized microorganisms, it presents a new, detailed examination that explains how elegant brains have been shaped in evolution. It consists of 19 chapters written by academic professionals in neuroscience, with various single-celled creatures and then introducing primordial types in vertebrates with the great abundance of the brains of vertebrates. Important topics are provided in a timely manner, because novel techniques emerged rapidly—as seen, for examples, in the next-generation sequencers and omics approaches. [...] Due March 2017
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€ 169.99 | £ 126.50
ISBN 978-4-431-56467-6

Brain Evolution by Design

This book presents a new, detailed examination that explains how elegant brains have been shaped in evolution. It consists of 19 chapters written by academic professionals in neuroscience, with various single-celled creatures and then introducing primordial types in vertebrates with the great abundance of the brains of vertebrates. Important topics are provided in a timely manner, because novel techniques emerged rapidly—as seen, for examples, in the next-generation sequencers and omics approaches. [...] Available
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Adaptation of Microbial Life to Environmental Extremes

This entirely updated second edition provides an overview on the biology, ecology and biodiversity of extremophiles. Unusual and less explored ecosystems inhabited by extremophiles such as marine hypersaline deeps, extreme cold, desert sands, and man-made clean rooms for spacecraft assembly are presented. An additional focus is put on the role of these highly specialized microorganisms in applied research fields, ranging from biotechnology and nanotechnology to astrobiology. [...] Due March 2017
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Shiga toxins

This book presents an overview of Shiga toxin-producing E. coli (STEC), with in-depth coverage of key areas such as recent Shiga toxin-related poisonings in Europe and the US, the structure, production, and mechanism of action of Shiga toxin, and current methods of detection. The globalization of food production has introduced new risk factors and intensified existing hazards, complicating the assurance of food safety. Foodborne illness outbreaks, such as those related to STEC, are becoming more common and more dangerous. [...] Due March 2017
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Metabolomics: From Fundamentals to Clinical Applications

This book provides a comprehensive view of metabolomics, from the basic concepts, through sample preparation and analytical methodologies, to data interpretation and applications in medicine. It is the first volume to cover metabolomics clinical applications while also emphasizing analytical and statistical features. Moreover, future trends and perspectives in clinical metabolomics are also presented. For researchers already experienced in metabolomics, the book will be useful as an updated definitive reference. [...] Available
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S. Shigeno, Stazione Zoologica Anton Dohrn, Naples, Italy; Y. Murakami, Ehime University, Matsuyama, Japan; T. Nomura, Kyoto Prefectural University of Medicine, Kyoto, Japan (Eds)

L. Shan, Texas A&M University, College Station, TX, USA; P. He, Texas A&M University, College Station, TX, USA (Eds)

Z. SONGYANG, Baylor College of Medicine Department of Biochemistry and Molecular, HOUSTON, TX (Ed)

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A. Sussulini, University of Campinas (UNICAMP) Institute of Chemistry Laboratory of Bioanalytics and Integrated Omics (LaBIO- mics), Campinas, Brazil (Ed)
M. Thellier, University of Rouen, Nantes, France

Plant Responses to Environmental Stimuli

In this unique book, Michel Thellier has combined recent discoveries with older data dealing with plant memory and its potential role on plant acclimatization to environment stimuli. By placing memory within an evolutionary frame, the author persuades us that a new way of research has opened in plant physiology. Detailing experiments in a simplified manner, that general readers with an interest in this topic will find it easy to follow.

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ISBN 978-94-024-1046-4

M. Vilà, Doñana Biological Station (EBD-CSIC), Sevilla, Spain; P. E. Hulme, Lincoln University, Lincoln, New Zealand (Eds)

Impact of Biological Invasions on Ecosystem Services

The book presents an analysis of the ecological, economic and social threats posed by the introduction and spread of non-native species. It provides a comprehensive description of impacts of non-native species from all five kingdoms of life across all ecosystems of the world. New insights into the impacts arising from biological invasions are generated through taking an ecosystem services perspective. […]

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F. Wan, Chinese Academy of Agricultural Sciences, Beijing, China; M. Jiang, Zhejiang University, Hangzhou, China; A. Zhan, Chinese Academy of Sciences Research Center for Eco-Environmental Sc, Beijing, China (Eds)

Biological Invasions and Its Management in China

The book discusses invasive-species problems in agriculture, forests and aquatic ecosystems, highlighting the invasive mechanisms and management of the selected invasive species. Biological invasion has become a serious global ecological and economic problem that deserves particular attention from both government officials and scientists. […]

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C. H. Wu, University of Delaware, Newark, DE, USA; C. N. Arighi, University of Delaware, Newark, DE, USA; K. E. Ross, Georgetown University Medical Center, Washington, DC, USA (Eds)

Protein Bioinformatics

This volume introduces bioinformatics research methods for proteins, with special focus on protein post-translational modifications (PTMs) and networks. […]

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M. Thellier, University of Rouen, Nantes, France

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ISBN 978-1-4939-6781-0

J. Wu, University of Michigan, Ann Arbor, MI (Ed)

Thermogenic Fat

This volume presents a collection of protocols that describe methodologies to study thermogenic fat biology from various angles. This book is divided into 2 parts. Part 1 focuses on establishing in vitro culture systems. The chapters in this section introduce techniques on how to isolate, culture, and differentiate primary fat cells from both laboratory mice and humans. This part also presents flow cytometry methods to isolate various subpopulations of precursors within the stromal vascular fraction of the adipose tissue, which contains both preadipocytes and immune cells. […]

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