Plant Growth Signaling

Agricultural plant cultivation and breeding programs have altered plant productivity and yield parameters extensively, yet the principles and underlying mechanisms are not well understood. At the cellular level, growth is the result of only two processes, cell division and cell expansion, but these two processes are controlled by intertwined signaling cascades and regulatory mechanisms forming complex regulatory networks. Ultimately this network is what plant scientists are trying to unravel.

The sequencing of model and agronomically important plant genomes allows complete insight into the molecular components involved in each process. Methods to quantify the molecular changes, image growth processes and reconstruct growth regulatory networks are rapidly developing. This volume gives a comprehensive overview of what is known about plant growth regulation and growth restraints due to environmental conditions and should allow readers at all levels an entry into this exciting field of research.

Features
- Overview on what is known about plant growth regulation and growth restraint by environmental conditions
- Allows readers at all levels an entry into this exciting field of research
- Valuable resource for active researchers in the field

Fields of interest
Plant Sciences; Agriculture; Plant Biochemistry

Target groups
Libraries, institutes, scientists

Discount group
P

Stem Cells

From Hydra to Man

“Stem Cells: From Hydra to Man” illustrates that there is more than human and mouse stem cells to learn from. Reflecting an enormous growth in the knowledge of stem cells in various organisms, the book presents the conceptual language and the nature of questions, as well as a summary of the advances in our understanding of stem cells from a comparative point of view that has resulted from the development of new technology and the development of novel model organisms over the past few decades. As such this book is largely a horizon analysis of a frontier rather than a retrospective. It presents an integrative approach to animal stem cells and covers the major contributions, tools and trends in a newly emerging field: comparative stem cell biology.

Features
- Covers the major contributions, tools and trends in a newly emerging field: comparative stem cell biology
- Reveals many common themes utilized in the maintenance and differentiation of stem cells of apparently disparate organs in animal and plant models
- Promises new insights into how stem cells act to construct and maintain tissues, and to reveal how the diverse stem cell systems may have evolved

From the contents

Fields of interest
Cell Biology; Developmental Biology; Evolutionary Biology

Target groups
Cell biologists, developmental biologists, evolutionary developmental biologists

Discount group
P

Algal Toxins: Nature, Occurrence, Effect and Detection

Proceedings of the NATO Advanced Study Institute on Sensor Systems for Biological Threats: The Algal Toxins Case, Pisa, Italy, 30 September - 11 October 2007

The first part deals with a general overview of the toxins and toxicity related to the algal world. The first part includes an introduction on the main algal features written by our group; then, the diversity of the cyanobacteria, the algal division that possesses more toxic species, in relation to the environment is described; an overview on the fresh water and marine algal toxins follows; and the allelophaty phenomenon, i.e. any influence on the growth and development of natural systems produced by the algae metabolites is described. The first part ends with the description of toxic algal blooms in several European geographical areas.

The second part deals with the review of sensor organisms, the use of biochemical methods and laser Doppler techniques for toxin determination; the use of nucleic acid sensor sensors for identification of toxic species; the use of immunological ELISA analyses combined with various electrochemical detection systems to quantify algal toxins.

Fields of interest
Life Sciences, general; Cell Biology; Computer Appl. in Life Sciences

Target groups
Phycologists, biologists, microscopists, students in biological fields, sensor developers

Discount group
P
Crop Biosecurity
Assuring our Global Food Supply
NATO Advanced Research Workshops on
Tools for Crop Biosecurity, Cairo, Egypt,
March 17-22, 2006, Budapest, Hungary, May
5-8, 2007

Prevention and preparedness are the two basic
approaches to maximize food security against any
sort of tampering, whether natural, inadvertent or
intentional. The NATO funded project “Tools for
crop biosecurity” was designed to strengthen the
cooperation among U.S., Europe and Israel in the
field of crop biosecurity and to generate awareness
on how the psychological, economic and cultural
consequences of crop bioterrorism, especially
attacks on soft targets such as crop seeds, could
have a disproportional adverse effect on Mediterra-
nean agriculture and, more generally, on society.
This book illustrates the achievements of the
project originated from the workshops organized
during the project itself taking in consideration
main microbiological threads posed to crops, the
tools to recognize and to control them, the needs
for international cooperation and research funds
to create networks which can face emerging risks
for agriculture.

Fields of interest
Agriculture; Plant Pathology; Microbiology

Target groups
Policy makers, experts in crop biosecurity, plant
pathologists, biologists, researchers, lawyers,
experts in diagnostics, agronomists, extension
services

Discount group
P

Trees in Patagonia
This book is a guide to the native trees and approxi-
mately 95% of the introduced arboreal species
of Argentine and Chilenan Patagonia. Introductory
chapters convey an overview of what is termed
‘Patagonia’ as well as on the geology, climate, soils,
and vegetation of Southern South America. Keys
based on vegetative characters and richly illus-
trated descriptions of more than 170 species form
the core of the manual. These chapters are followed
by concise entries on afforestations, urban trees,
and plantations of fruit trees in climatic enclaves.
Renowned experts describe the most important
National Parks of both Argentine and Chilenan
Patagonia. The last chapter is devoted to Carl
Skottsberg and his remarkable expedition through
Patagonia a hundred years ago.

Features
- Concise overview of geology, climate and soil
  of Argentine as well as Chilenan Patagonia
- Includes introduced arboreal species
- Illustrated, straightforward keys, based on
  vegetative characters
- Special chapters about
trees in urban landscapes and afforestations

Contents
How to use this guide for identifying trees.-
Southern South America and the term ‘Patag
- Geology, climate, and soils of Patagonia.-
- Vegetation of Patagonia.-
- What is a tree?-
- Flowering plants and their divisions.-
- Characteristic features of gymnosperms (conifers).-
- Characteristic features of angiosperms.-
- Dicots and monocots.-
- Keys to groups of trees.-
- Genera and species of gymnosperms.-
- Genera and species of dicots.-
- Genera and species of monocots.-
- Afforestation with Pinaceae in zones of transition.-
- Fruit trees in Los Antiguos and Chile Chico.-
- Trees in urban landscapes.-
- National parks, forest reserves, and
  regional reserves of Southern Argentina and
- Carl Skottsberg’s “modest” expedition –
  A look at the scientific discovery of Patagonia.

Fields of interest
Plant Systematics/Taxonomy/Biogeography;
Forestry; Tree Biology

Target groups
Botanists, dendrologists, urban landscape experts,
libraries

Discount group
P

The Nucleus
Volume 1: Nuclei and Subnuclear Components

Volume I: Nuclei and Subnuclear Structures
presents an overview of features of the intra-
nuclear environment, followed by the most recent
procedures for isolating nuclei from a wide range
of cell types including muscle cells, yeast, oocytes,
cells with polytene nuclei, Arabidopsis, trypano-
somes, and dinoflagellates. The latest methods are
described for isolating and working with nucleoli,
constitutive heterochromatin, pathology-associ-
ated inclusions, and chromatin and for examining
glycosylation, sumoylation, and ADP-ribosyl-
ation of nuclear proteins. Written in the highly
successful Methods in Molecular Biology® series
format, chapters contain lists of necessary mate-
rials and reagents, readily reproducible protocols,
and tips for troubleshooting and avoiding known
pitfalls.

The Nucleus, Volume I: Nuclei and Subnuclear
Structures is an essential reference for scientists
who are working on our rapidly growing under-
standing of the cell nucleus and its activities.

Features
- Includes state-of-the-art procedures for
  isolating and working with nuclei from a wide
  range of cell types, and procedures for studying
  their components including pathology-related
  structures

Fields of interest
Cell Biology; Biochemistry, general; Biological
Techniques

Target groups
Nucleic acid chemists, cellular biologists,
biochemists

Discount group
P
The Nucleus
Volume 2: Physical Properties and Imaging Methods

Volume 2: Physical Properties and Imaging Methods presents biophysical approaches to study the mechanical properties of nuclei, together with a comprehensive range of imaging methods. These include FISH, FRAP, FRET, molecular beacons, fluorescence correlation spectroscopy, single molecule tracking, and combing DNA for optical microscopy, recognition imaging for atomic force microscopy, and hybridisation, tomography, and spectroscopic imaging for electron microscopy. Written in the highly successful Methods in Molecular Biology™ series format, chapters contain lists of necessary materials and reagents, readily reproducible protocols, and tips for troubleshooting and avoiding known pitfalls.

The Nucleus, Volume 2: Physical Properties and Imaging Methods provides a comprehensive collection of the cutting-edge methods making a major contribution to understanding the nucleus and its nanostructure today.

Features
- Provides the latest protocols to study the mechanical properties of the nucleus and for imaging down to the molecular level by optical, atomic force, and electron microscopy.

From the contents
Physical properties of the nucleus studied by micropipette aspiration.- Mechanical properties of interphase nuclei probed by cellular strain application.- Gene expression in polytene nuclei.- Electron microscope visualization of RNA transcription and processing in Saccharomyces cerevisiae by Miller chromatin spreading.

Fields of interest
Cell Biology; Biochemistry, general; Imaging / Radiology

Target groups
Nucleic acid chemists, cellular biologists, biochemists, protein scientists, imaging specialists

Discount group
P

Host Plant Catalog of Aphids

The major part of this catalog consists of host lists of particular aphid species in the Palaearctic region based on published and unpublished data of more than 2,400 authors with respective references arranged by geographical provenience. Separate lists are included of aphids living on particular plants arranged in alphabetical order of plant genera and families, mosses, ferns, gymnosperms, dicotyledons and monocotyledons.

Features
- Presents the database of 3,654 aphid species which were identified on 11,793 plants from 246 plant families
- About 2/3 of the world's aphid species listed
- The host records are arranged alphabetically by aphid species with references arranged by geographical area
- About 2,500 unpublished, collection-based host records from Central Europe, Balkan, Central Asia and Russia have been incorporated.

Fields of interest
Plant Pathology; Entomology; Animal Ecology

Target groups
Institutions and researchers dealing with /or interested in study of insect taxonomy and ecology, insect–plant relationships, biodiversity, plant protection and nature conservation

Discount group
P

The Economics of Forest Disturbances
Wildfires, Storms, and Invasive Species

This book provides a unique, state-of-the-art review of both traditional and emerging themes in the economics of natural forest disturbances. Although natural disturbances such as wildfire, hurricanes and pests have long been recognized as important factors influencing the structure and health of forests, recent and dramatic increases in the costs and damages associated with forest disturbances necessitates a new evaluation of these processes. The authors show that neo-classical economic principles can be integrated with ecosystem analysis and modern econometric methods to uncover the causes and consequences of natural forest disturbances. The chapters encompass modern areas of concern in forest economics and policy, including temporal and spatial dynamics of economic-ecologic systems, risk-reducing mitigation and adaptation strategies, and the valuation of impacts on market and non-market resources.

Features
- The first book to evaluate the economic aspects of natural forest disturbances
- Written by leading experts in the field
- Contains rigorous empirical analyses within a policy oriented focus
- Integrates economics and ecology of disturbances
- Systematic analysis of different sources of forest disturbances in a unified framework

From the contents

Fields of interest
Forestry Management; Economic Policy; Agricultural Economics

Target groups
Forest policy analysts and decision-makers, risk managers, forest economists and graduate students studying natural resource economics

Discount group
P
Pathways to High-tech Valleys and Research Triangles

Innovative Entrepreneurship, Knowledge Transfer and Cluster Formation in Europe and the United States

In some cases internationally renowned universities and/or research laboratories inspire engineers and scientists to become entrepreneurs and take the lead in cluster development (e.g. in the chapters on Food Valley Wageningen, the Knowledge Pearl Leuven-Flanders and the Scandinavian Oresund cluster). In other cases indigenous flagship firms, collaborating with each other and outsourcing many activities to smaller companies, may act as a region's catalyst (e.g. in the chapters on Flanders Vegetable Valley, the Dutch horticultural industry and the Defence Diversification Agency in the UK).

Features
- Provides a comparative perspective on the development of promising high-technology valleys and triangles like North Carolina, Israel Research Triangle Park, Knowledge Pearl Leuven-Flanders, emulating and learning from the leading innovation hotspot in the world, Silicon Valley. Also provides inside perspectives on the promotion of innovation, entrepreneurship and knowledge transfer in distinct industries.

Fields of interest
R & D/Technology Policy; Life Sciences, general; Regional Science

Target groups
Technology managers, business developers, economic policy makers, investors/venture capitalists, entrepreneurs, consultants

Discount group
P

Due July 2008

Only available in print


$189.00

Also available as softcover

$99.00

T.D. Kocher, University of Maryland, MD, USA; C. Koelle, Clemson University, Clemson, SC, USA (Eds.)

Genome Mapping and Genomics in Fishes and Aquatic Animals

Mapping of animal genomes has generated huge databases and several new concepts and strategies, which are useful to elucidate origin, evolution and phylogeny. Genetic and physical maps of genomes further provide precise details on chromosomal location, function, expression and regulation of academically and economically important genes. The series Genome Mapping and Genomics in Animals provides comprehensive and up-to-date reviews on genomic research on a large variety of selected animal systems, contributed by leading scientists from around the world. This volume summarizes the first era of genomic studies of aquaculture species, in which the tools and resources necessary to support whole-genome sequencing were developed. Together with future technologies these data will provide the basis for the selective breeding of aquaculture species. Animals presented in this volume include salmonids, cyprinids, catfish, tilapias, European sea bass, Japanese flounder, shrimps and oysters.

Features
- The huge amount of information hitherto dispersed in journals is now available in a clearly structured reference work. An invaluable work that will promote further genomic research.

Fields of interest
Animal Genetics and Genomics; Fish & Wildlife Biology & Management; Freshwater & Marine Ecology

Target groups
Scientists and biotechnologists in animal genetics, nutrition, marine and fresh water biology, ecology

Discount group
P

Due July 2008

2008, Approx. 200 p. 29 illus., 11 in color. (Genome Mapping and Genomics in Animals, Volume 2) Hardcover

$199.00
ISBN 978-3-540-73836-7

J. Kurreck (Ed.)

Therapeutic Oligonucleotides

This book provides a comprehensive overview of the development of therapeutic oligonucleotides for therapeutic applications, touching on a number of additional oligonucleotides including a number of small interfering RNAs currently in various phases of clinical development. Written by leading expert scientists from both academia and leading biotechnical companies, the authors provide a compelling update on current status of RNA interference with emphasis on fascinating topics including oligonucleotides: antisense oligonucleotides, ribozymes, siRNAs, decoy oligonucleotides and aptamers.

Features
- Provides a comprehensive overview of the development of therapeutic oligonucleotides for therapeutic applications, touching on a number of additional oligonucleotides including a number of small interfering RNAs currently in various phases of clinical development. Written by leading expert scientists from both academia and leading biotechnical companies. Will be a valid resource for researchers and students as well as academia, consultants and scientists.

From the contents

Fields of interest
Biochemistry, general; Organic Chemistry; Pharmacology/Toxicology

Target groups
Researchers and students as well as academia, consultants and scientists

Discount group
P

Due July 2008

Only available in print


$179.00

RSCPublishing

Due July 2008

Only available in print


$189.00

Also available as softcover

$99.00

Due July 2008

2008, Approx. 200 p. 29 illus., 11 in color. (Genome Mapping and Genomics in Animals, Volume 2) Hardcover

$199.00
ISBN 978-3-540-73836-7
**Plant Physiological Ecology**

The growth, reproduction and geographical distribution of plants are profoundly influenced by their physiological ecology: the interaction with the surrounding physical, chemical, and biological environments. This renowned textbook is notable in emphasizing that the mechanisms underlying plant physiological ecology can be found at the levels of biochemistry, biophysics, molecular biology, and whole-plant physiology. At the same time, the integrative power of physiological ecology is well-suited to assess the costs, benefits, and consequences of modifying plants for human needs, and to evaluate the role of plants in ecosystems.

**Features**
- Renowned textbook suitable for plant ecology, plant physiology, and molecular biology courses
- Notable for its integration of molecular-, whole plant-, and ecosystem-level processes
- Features boxed entries that provide extended discussions of selected issues, a glossary, and an extensive bibliography
- New edition includes full color images throughout

**From the contents**

**Fields of interest**
Plant Sciences; Plant Ecology; Plant Physiology

**Target groups**
Advanced students in plant physiology/ecology

**Discount group**
P

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**Lipid Signaling Protocols**

Lipid Signaling Protocols assembles in a single volume the various tools and methodologies needed by the interested investigator to unravel lipid dependent signaling and cell function. Divided into two convenient sections, the volume begins by summarizing the physical properties of hydrophobic metabolites as well as the physical methodologies used for their analysis, which leads to the second section and its selection of biological methods, focused around the most relevant lipids, their corresponding metabolizing enzymes and the recognition proteins. Following the highly successful Methods in Molecular Biology™ series format, the chapters provide readily reproducible laboratory protocols, lists of necessary materials and reagents, and the tips on troubleshooting and avoiding known pitfalls.

**Features**
- Describes cutting-edge lipid analysis and quantification methods
- Provides a selection of practical approaches to the study of lipid metabolism and recognition in the cellular context
- Includes reproducible, step-by-step laboratory protocols

**From the contents**

**Fields of interest**
Cell Biology; Biochemistry, general; Biological Techniques

**Target groups**
Cell biologists and molecular biologists

**Discount group**
P

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**Molecular Mechanisms of Plant and Microbe Coexistence**

Molecular Mechanisms of Plant and Microbe Coexistence presents studies on the complex and manifold interactions of plants and microbes at the population, genomics and proteomics level. The role of soil microbial diversity in enhancing plant health and plant microbe beneficial symbioses is discussed. Microbial communities are shown in the light of evolution. Main topics include genome coexistence and the functional genomics and proteomics of plant-associated microbes, which could form the basis for new environmentally benign strategies to combat infectious plant diseases and regulate plant growth. Further chapters focus on the role of signaling during the different stages of plant microbe coexistence, in symbiotic or pathogenic relationships, in quorum sensing and plant viral infections. Methods for studying the interactions in the root zone complement the book, which will certainly be of relevance in the practical application to agriculture, food security and for maintaining the balance of our ecosystems.

**Features**
- With contributions from leading scientists of varied backgrounds
- Including methodological chapters on cutting-edge technologies
- Interdisciplinary approach to soil live and sustainable agriculture

**Fields of interest**
Agriculture; Microbiology; Plant Sciences

**Target groups**
Researchers in microbiology, plant sciences, plant breeding, agriculture and soil ecology

**Discount group**
P

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**Due June 2008**

- 2nd ed. 2008. 344 illus., 195 in color. Hardcover
  - $79.95

**Due July 2008**

- 2008. Approx. 510 p. 54 illus. (Soil Biology, Volume 15) Hardcover
  - $269.00
  - ISBN 978-3-540-75574-6
**Stem Cells, Human Embryos and Ethics**

*Interdisciplinary Perspectives*

Is it acceptable from an ethical point of view to use stem cells from human embryos for scientific research and clinical therapy? And what are the weaknesses and strengths of various opinions and positions when they are critically evaluated? These are the main problems dealt with in this book. The various chapters as a whole give a comprehensive, many-sided and balanced discussion of the subject. The book contains contributions from biological, medical, social, political, philosophical and theological perspectives. The authors have been chosen because of their professional competence, many of them being respected scholars on a top international level. They give an updated contribution from their own discipline in order to enlighten the different aspects of the common theme. The authors cover various positions and evaluations with regard to the question of the use of embryonic stem cells for research and therapy.

**Features**
- Gives a survey of the stem cell field nowadays
- Presents an overview of different alternatives regarding political and legal approaches to the burning questions of regulations of human embryonic stem cell research
- Informs about differing ethical evaluations and arguments from philosophical and theological point of view concerning use of embryonic stem cells in research and therapy

**From the contents**

**Fields of interest**
Developmental Biology; Ethics; Biomedicine; general

**Target groups**
Academics and professionals working with stem cell research (biology, medicine, law, philosophy, theology etc.), advanced and graduate students, politicians, everybody interested in ethical problems

**Discount group**
P

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**Evolutionary Biology from Concept to Application**

Every biological system is the outcome of its evolution; therefore, the deciphering of its evolutionary history is of tremendous importance to understand the biology of a system. Since 1997 scientists of different disciplines have held an annual “Evolutionary Biology Meeting” at Marseille (France) in order to discuss their research developments, exchange ideas and start collaborations. Consisting of the most representative talks of the 11th meeting, this book provides an up-to-date overview of evolutionary concepts and how these concepts can be applied to a better understanding of various biological aspects. It is divided into the following four parts: Modelization of Evolution – Concepts in Evolutionary Biology – Knowledge – Applied Evolutionary Biology. This book is an invaluable source of information not only for evolutionary biologists, but also for biologists in general.

**Features**
- Focusses on applied evolution, a new area dealing with the use of evolutionary biology concepts for a better understanding of biological systems

**From the contents**

**Fields of interest**
Evolutionary Biology; Developmental Biology; Bioinformatics

**Target groups**
Researchers and advanced students

**Discount group**
P

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**Protein-Nucleic Acid Interactions**

*Structural Biology*

This book provides both in-depth background and up-to-date information in this area. The chapters are organized by general themes and principles, written by experts who illustrate topics with current findings. Topics covered include: the role of ions and hydration in protein-nucleic acid interactions; transcription factors and combinatorial specificity; indirect readout of DNA sequence; single-stranded nucleic acid binding proteins; nucleic acid junctions and proteins, RNA protein recognition; recognition of DNA damage. It will be a key reference for both advanced students and established scientists wishing to broaden their horizons.

**Features**
- Topics covered include: the role of ions and hydration in protein-nucleic acid interactions, transcription factors and combinatorial specificity, indirect readout of DNA sequence, single-stranded nucleic acid binding proteins, nucleic acid junctions and proteins, RNA – protein recognition, and recognition of DNA damage
- A key reference for both advanced students and established scientists

**From the contents**
1. The role of water and effects of small ions in site-specific protein-DNA interactions. 2. Structural Basis for Sequence-Specific. 3. DNA Recognition by Transcription Factors and their Complexes. 4. Indirect Readout Of DNA Sequence by Proteins. 5. Single-stranded Nucleic Acid (SSNA)-binding Proteins. 6. DNA junctions and their interaction with resolving enzymes. 7. RNA-protein Interactions in Ribonucleoprotein Particles and Ribonucleases.

**Fields of interest**
Biochemistry, general; Crystallography; Applied Microbiology

**Target groups**
Advanced students and established scientists

**Discount group**
P

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Due August 2008

2008. XVI, 268 p. Softcover  
► approx. $49.95  
ISBN 978-1-4020-6988-8

Due August 2008

► approx. $139.00  

Due August 2008

► $249.00  
Molecular Embryology

Methods and Protocols

This new edition offers a comprehensive guide to cutting-edge methods used today across the field of molecular embryology. These powerful techniques take advantage of the most commonly used vertebrate experimental models: murine embryos for their genetics, chick embryos for in vivo manipulation, zebrafish for mutagenesis, amphibian embryos, and nonvertebrate chordates. The book emphasizes the most important methods of experimental molecular biology and the particular advantages of each different species.

Features
► Provides an excellent source for understanding the strengths and weaknesses of the various vertebrate model organisms
► Comprehensive guide to the cutting-edge methods amongst the dramatically growing field of vertebrate molecular embryology
► Experts in the field thoroughly describe protocols and techniques accompanied by illustrations
► New approaches for efficient production of transgenic zebrafish and microarrays

From the contents
The Mouse as a Developmental Model.- Culture of Postimplantation Mouse Embryos.- Organ Culture in the Analysis of Tissue Interactions.- Treatment of Mice with Retinoids In Vivo and In Vitro.- Analysis of Skeletal Ontogenesis through Differential Staining of Bone and Cartilage.- Cell Grafting and Labeling in Postimplantation Mouse Embryos.- Production of Transgenic Rodents by the Microinjection of Cloned DNA Into Fertilized One-Celled Eggs.

Fields of interest
Developmental Biology; Cell Biology; Microbiology

Target groups
Developmental and molecular biologists and biologists using transgenic and gene knock-out approaches, embryologists, and immunologists

Discount group
P

Genomics-Assisted Crop Improvement

Vol 1: Genomics Approaches and Platforms
Vol 2: Genomics Applications in Crops

Genomics research has great potential to revolutionize the discipline of plant breeding. This two-volume set provides a critical assessment of genomics tools and approaches for crop breeding. Volume 1, entitled “Genomics Approaches and Platforms”, illustrates state-of-the-art genomics approaches and platforms presently available for crop improvement. Volume 2, entitled “Genomics Applications in Crops”, compiles crop-specific studies that summarize both the achievements and limitations of genomics research for crop improvement. We hope that these two volumes, while providing new ideas and opportunities to those working in crop breeding, will help graduate students and teachers to develop a better understanding of the applications of crop genomics to plant research and breeding.

Features
► A unique collection of review articles on plant genomics
► A state-of-the-art presentation of genomics applied to crop improvement
► A bridge to fill the gap between conventional and modern breeding

Fields of interest
Plant Sciences; Plant Genetics & Genomics; Agriculture

Target groups
Genomics specialists, geneticists, plant breeders, crop physiologists, teachers, graduate and undergraduate students; university and research institute libraries

Discount group
P

Pine Wilt Disease: A Worldwide Threat to Forest Ecosystems

The pinewood nematode (PWN), Bursaphelenchus xylophilus, the causal agent of pine wilt disease (PWD), is a serious pest and pathogen of forest tree species, in particular among the genus Pinus. It was first reported from Japan in the beginning of the XXth century, where it became the major ecological catastrophe of pine forests, with losses reaching over 2 million m³/year in the 1980s. It has since then spread to other Asian countries such as China, Taiwan and Korea, causing serious losses and economic damage. In 1999, the PWN was first detected in the European Union (EU), in Portugal, and immediately prompted several government (national and EU) actions to assess the extent of the nematode’s presence, and to contain B. xylophilus and its insect vector (Monochamus galloprovincialis) to an area with a 30 km radius in the Setúbal Peninsula, 20 km south of Lisbon. International wood trade, with its political as well as economic ramifications, has been seriously jeopardized.

Features
► Highly relevant subject, especially in Europe, in light of the recent discovery of one of the most dangerous pathogens and pests of pine forests
► Highly inter-disciplinary text, covering all issues pertaining to pine wilt disease, from molecule to ecosystem, from the nematode to the insect vector, from forest ecology to plant physiology, etc.
► Also deals with trade and political issues which becomes useful for decision-makers

Fields of interest
Forestry; Plant Pathology; Invertebrates

Target groups
Libraries, researchers, scientists and graduate students of forestry, nematology, entomology, plant ecology and plant pathology, forestry technicians, administrators and decision-makers

Discount group
P
Origin of Group Identity
Viruses, Addiction and Cooperation

The molecular evolution of viruses is fascinating and quite controversial, relevant to the evolution of living organisms, a determinant in pathogenesis by viruses, and amenable to detailed study in various laboratories around the globe. Evolution is the product of variation and selection. Genetic recombination is a major source of variation for evolutionary selection. Full understanding of virus evolution requires knowledge of the inventory of existing viruses, their distribution in biological space and time and their interactions with other viruses and living organisms.

The basic focus of this volume will be to trace the evolution (or accumulation) of biological identity systems from molecules to microbes, through animals to primate and human social structure. Overall, the volume will be organized so that it will trace the evolution of group identification systems from simple unicellular life forms, through the ‘tree of life’ all the way to complex hominoid social structures.

Features
- Luis Villarreal is one of the most respected virologists in the country - if not the world; he is a true leader in the field
- First volume to trace the evolution of biological identity systems from simple unicellular life forms, through the ‘tree of life’ all the way to complex hominoid social structures
- Will also evaluate the role of genetic parasites in the origination of ‘addiction’ based molecular strategies

From the contents
An overview: identity from bacteria to belief.
- The prokaryotes; viruses, hyperparasites and the origin of group identity.
- Sensory systems (light, odor, pheromones) in communities of oceanic microbes.
- Subjugation of the individual; prokaryotic group living: blooms, slime and mats.

Fields of interest
Evolutionary Biology; Virology; Ecology

Target groups
Researchers, scientists, professionals, and graduate students in the fields of evolutionary biology, virology, ecology, immunology, genetics, microbiology, behavioral/social biology, infectious disease, and medicine; lay people interested in evolution

Discount group
P

Wnt Signaling
Volume 1, Pathway Methods and Mammalian Models

Wnt Signaling: Methods and Protocols examines both biochemical assays and vertebrate and invertebrate model systems to provide a point of reference to current molecular protocols and the diverse model systems employed to study this important signaling pathway. In Volume 2, Pathway Models, the diverse vertebrate and invertebrate models that have shaped the Wnt signaling field are described, presenting an overview of the unique properties of each organism, like asymmetric cell division in C. elegans and epithelial morphogenesis in Dicyostelium, with respect to studying Wnt/FZD function. As a volume in the highly successful Methods in Molecular Biology series, chapters contain readily reproducible laboratory protocols, complete with lists of necessary equipment and reagents and the Notes section, which reveals helpful troubleshooting tips. Comprehensive and cutting-edge, Wnt Signaling: Methods and Protocols collects the expertise and knowledge of many leaders in the field.

Features
- Records our progress to date in understanding the intricacies of Wnt signalling
- Includes assays for and models of both canonical and non-canonical Wnt signalling pathways
- Contributing authors are either current or past members of the main laboratories that have shaped the Wnt field
- Includes detailed methods as well as overviews, providing easy to follow protocols as well as a background/current status of the field

Fields of interest
Biochemistry, general; Cell Biology; Molecular Medicine

Target groups
Biochemists, molecular and cellular biologists, cancer researchers

Discount group
P

Due July 2008

- $99.00

Discount group
P

Due August 2008

- $99.50

Discount group
P

Due August 2008

2008. Approx. 420 p. 54 illus., 2 in color. (Methods in Molecular Biology, Volume 469) Hardcover
- $99.50

Discount group
P