New Series
SpringerBriefs in Molecular Medicine

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Fields of interest
Pharmacology/Toxicology; Human Genetics

Target groups
Professional/practitioner

Discount group
Professional Non-Medical

Due January 2014
2014. IX, 108 p. 34 illus., 32 in color. (SpringerBriefs in Molecular Medicine) Softcover
 ► $49.95
 ISBN 978-3-642-45178-2

Due May 2014
2014. 330 p. 90 illus., 45 in color. (Methods in Molecular Biology, Volume 1140) Hardcover
 ► approx. $139.00

Fields of interest
Pharmacology/Toxicology; Human Genetics

Target groups
Professional/practitioner

Discount group
Professional Non-Medical
Transcriptional and Epigenetic Mechanisms Regulating Normal and Aberrant Blood Cell Development

During vertebrate hematopoiesis many specialized cell types are formed with vastly different functions such as B cells, T cells, granulocytes, macrophages, erythrocytes and megakaryocytes. To tightly control the enormous proliferative potential of developing blood cells, an intricately balanced signaling and transcription network has evolved that ensures that the different cell types are formed at the right time and in the right numbers. Intricate regulatory mechanisms ensure that blood cells function properly and have a determined life span.

Features
► Translational aspect: describes how immune cell function is controlled and highlights human diseases where this is dysfunctional ► From animal models to humans: Describes how primitive organisms use the epigenetic regulatory machinery and explains what controls the function of specialized cells of the human immune system ► With extensive glossary

Contents
Preface.- Introduction.- Non-mammalian hematopoiesis.- Epigenetic mechanisms regulating mammalian hematopoietic stem cell development and function.- Epigenetic and transcriptional mechanisms regulating cell fate decisions and blood cell lineage development.- Epigenetic control of immune cell function.- Subject index.

Fields of interest
Human Genetics; Cancer Research

Target groups
Research

Discount group
Professional Non-Medical

Due February 2014

2014. XII, 510 p. 49 illus. in color. (Epigenetics and Human Health) Hardcover ► $209.00 ISBN 978-3-642-45197-3

Super-Resolution Microscopy Techniques in the Neurosciences

E. F. Fornasiero, S. O. Rizzoli, European Neuroscience Institute, Göttingen, Germany (Eds)

Fields of interest
Neurosciences; Biological Microscopy

Target groups
Professional/practitioner

Discount group
Professional Non-Medical

Due February 2014

2014. XX, 580 p. 129 illus., 115 in color. (Neuromethods, Volume 86) Hardcover ► $139.00 ISBN 978-1-62703-982-6

Biomedicine

C. Bonifer, P. Cockerill, University of Birmingham Medical and Dental Sciences, Birmingham, UK (Eds)

Homing Endonucleases

Methods and Protocols

Contents

Fields of interest
Human Genetics; Genetic Engineering

Target groups
Professional/practitioner

Discount group
Professional Non-Medical

Due February 2014

K. Foster, Syntaxin Ltd., Abingdon, UK (Ed)

**Clinical Applications of Botulinum Neurotoxin**

Currently, there are tremendous advances being made in understanding the basic science of both the structure and function of botulinum neurotoxins. This knowledge is opening up opportunities in regard to both therapeutic uses and treatment and protection options for civil and bio-defense applications. This volume fully evaluates the status of neurotoxin research and exploitation. The book is a multi-authored collection of chapters written by the leading authorities responsible for the current scientific and clinical research that is advancing the understanding and exploitation of the neurotoxins and is both up to date and authoritative.

**Features**
- Features chapters from the leading authorities in the field of neurotoxins
- Explores the clinical applications of botulinum neurotoxin and describes future therapeutic opportunities
- Useful to researchers and clinicians in neuroscience, neurology, biochemistry, microbiology and cell biology

**Contents**
- Botulinum Toxin as a Clinical Product
- Clinical Use of Botulinum Neurotoxin: Neuromuscular Disorders
- Clinical Use of Botulinum Neurotoxin: Autonomic Conditions
- Clinical Use of Botulinum Neurotoxin: Urogenital Disorders Including Overactive Bladder
- Clinical Use of Botulinum Neurotoxins: Pain
- Future Developments: Engineering the Neurotoxin

**Fields of interest**
- Molecular Medicine; Pharmacology/Toxicology; Biomedicine general

**Target groups**
- Research

**Discount group**
- Professional Non-Medical

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M. J. Hilton, University of Rochester Medical Center, Rochester, NY, USA (Ed)

**Skeletal Development and Repair**

**Methods and Protocols**

**Contents**
- Overview of Skeletal Development
- Overview of Skeletal Repair (Fracture Healing and Its Assessment)
- Generation of Closed Transverse Fractures in Small Animals
- The Murine Femoral Bone Graft Model and a Semi-Automated Histomorphometric Analysis Tool
- Surgical Induction of Posttraumatic Osteoarthritises
- A Mouse Model of Flexor Tendon Repair
- Cartilage Explant Cultures
- Renal Capsule Transplantations to Assay Skeletal Angiogenesis
- Whole Mount Skeletal Staining
- Tips and Techniques for Processing and Sectioning Undecalcified Murine Bone Specimens
- Preparation of Thin Sections from Non-fixed and Undecalcified Hard Tissues Using Kawamoto’s Film Method (2012)
- Demineralized Murine Skeletal Histology
- Beta-Galactosidase Staining in the Skeleton
- Whole-Mount In Situ Hybridization on Murine Skeletogenic Tissues
- Non-Radioactive In Situ Hybridization on Skeletal Tissue Sections
- Radioactive In Situ Hybridization to Detect Gene Expression in Skeletal Tissue Sections
- Proliferation Assays (BrDU and EdU) on Skeletal Tissue Sections
- TUNEL Assay on Skeletal Tissue Sections
- Proliferation Assays (BrdU and EdU) on Skeletal Tissue Sections
- Non-Radioactive In Situ Hybridization on Skeletal Tissue Sections
- Radioactive In Situ Hybridization to Detect Gene Expression in Skeletal Tissue Sections
- Proliferation Assays (BrDU and EdU) on Skeletal Tissue Sections
- TUNEL Assay on Skeletal Tissue Sections
- Proliferation Assays (BrdU and EdU) on Skeletal Tissue Sections

**Fields of interest**
- Molecular Medicine; Regenerative Medicine/Tissue Engineering

**Target groups**
- Research

**Discount group**
- Professional/Practitioner

**Discount group**
- Professional Non-Medical

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J. Kuhn, NIH-NIAID Div. Clinical Research, Bethesda, MD, USA

P. B. Jahrling, NIH-NIAID Integrated Research Facility Frederick, Frederick, MD, USA; C. H. Calisher, Colorado State University Arthropod-borne & Infectious, Fort Collins, CO, USA (Eds)

**Simian Hemorrhagic Fever**

Simian hemorrhagic fever is an acutely fatal disease of Asian macaques. It is caused by simian hemorrhagic fever virus (SHFV), which is currently classified as an arterivirus in the family Arteriviridae, order Nidovirales. In contrast to its closest relatives, the arteriviruses equine arteritis virus, lactate dehydrogenase-elevating virus, and porcine respiratory and reproductive syndrome virus, SHFV is almost completely uncharacterized. Thus far, SHFV has never been isolated from wild animals, and all outbreaks have occurred within primate-holding facilities. Recently, scientific interest in simian hemorrhagic fever has increased in the biodefense community because the disease closely resembles viral hemorrhagic fevers (VHFs) caused by certain arena-, bunya-, flavi-, and filovirids.

**Features**
- First book to address simian hemorrhagic fever (virus)
- Incomparable comprehensive knowledge about Simian hemorrhagic fever (SHF) is provided; SHFV can be widely used as research model for any human hemorrhagic fevers such as ebolavirus disease, Lassa fever, Rift Valley fever or Crimean-Congo hemorrhagic fever.
- The book contains the first-ever historical description of the definition and classification of viral hemorrhagic fevers – important for all researchers working on any of numerous viral hemorrhagic fever viruses.

**Fields of interest**
- Virology; Microbiology; Infectious Diseases

**Target groups**
- Research

**Discount group**
- Professional Non-Medical

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Humana Press

Due February 2014

2014. I, 521 p. 12 illus., 8 in color. (Current Topics in Neurotoxicity, Volume 5) Hardcover

➤ $209.00

ISBN 978-1-4939-0260-6

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Due January 2014

2014. XVIII, 220 p. 78 illus., 68 in color. (Methods in Molecular Biology, Volume 1130) Hardcover

➤ $139.00

ISBN 978-1-62703-988-8

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Springer Wien New York

Due April 2014

Archives of Virology Supplement, Volume 21

2014. 370 p. 60 illus., 20 in color. Hardcover

➤ $209.00

ISBN 978-3-211-99692-8
T. H. Park, Seoul National University, City, Korea, Republic of (South Korea) (Ed)

Bioelectronic Nose
Integration of Biotechnology and Nanotechnology

Bioelectronic noses have great potential for fast, reliable detection for the various applications. Significant efforts have been made toward the development of high-performance electronic nose, utilizing synthetic materials as sensing elements, for various applications.

Features
- Provides overview from concept to development and future perspectives
- Covers applications in a wide variety of areas and industries and up to date overview of advances in olfactory sensing devices
- Describes the various technologies for producing olfactory receptors and biosensors

Contents
- Concept of Bioelectronic Nose
- Mechanisms of olfaction
- Olfactory Receptor Proteins
- Odorant- Receptor Interaction
- Cell-Based System for Identification of Olfactory Receptors
- Neurobiology and cultivation of olfactory receptor neurons on a chip
- Production of Olfactory Receptors Using Commercial E. coli Cell-free Systems
- Production of Olfactory Receptors and Nanosomes Using Yeast System for Bioelectronic noses
- Production of Olfactory Receptor and Nanovesicle Using Heterologous Cell Systems for the Development of a Bioelectronic Nose
- Biosensors Based on Odorant Binding Proteins
- Optical Methods in Studies of Olfactory System
- Carbon Nanotube-based Sensor Platform for Bioelectronic Nose
- Conducting Polymer Nanomaterial-Based Sensor Platform for Bioelectronic Nose
- Applications and Perspectives of the Bioelectronic Nose

Fields of interest
- Biomedicine general; Biotechnology; Biomedical Engineering

Target groups
- Research

Discount group
- Professional Non-Medical

Due February 2014

2014. XII, 613 p. 37 illus., 27 in color. (Handbook of Experimental Pharmacology, Volume 220) Hardcover
- $459.00
ISBN 978-3-642-45105-8

Due March 2014

2014. Approx. 300 p. 70 illus. in color. Hardcover
- approx. $189.00
ISBN 978-94-017-8612-6

Due February 2014

2014. XV, 256 p. 39 illus., 22 in color. Hardcover
- $189.00
ISBN 978-4-431-54763-1

Biomedicine