

PCR Troubleshooting and Optimization

The Essential Guide

Editors: **Suzanne Kennedy and Nick Oswald**

c. 220 pp., January 2011

ISBN 978-1-904455-72-1 \$310 / £159

Topics include: Difficult templates and Inhibitors of PCR; Controls and standard curves in PCR; Obtaining maximum PCR sensitivity and specificity; RT-PCR optimization strategies; RT-PCR instrumentation; qPCR data analysis; MIQE guidelines; Applications for epigenetics research; High Resolution Melting Analysis; Microfluidic emulsion PCR.

Microbial Population Genetics

Edited by: **Jianping Xu**

viii + 214 pp., March 2010

ISBN 978-1-904455-59-2, \$310 / £159

Topics covered include microbial systematics, comparative microbial genomics, horizontal gene transfer, pathogenic bacteria, nitrogen-fixing bacteria, cyanobacteria, microalgae, fungi, malaria parasites, viral pathogens and metagenomics.

Environmental Molecular Microbiology

Edited by: **Wen-Tso Liu and Janet K. Jansson**

viii + 232 pp., January 2010

ISBN: 978-1-904455-52-3, \$310 / £159

Current technologies and their applications. Includes: microbial diversity, phylogeny, microbial communities, 16S rRNA, metagenomics, metaproteomics, micro-arrays, molecular fingerprinting, soil, water, plants, humans, biofilms.

Metagenomics

Theory, Methods and Applications

Edited by: **Diana Marco**

x + 212 pp., January 2010

ISBN: 978-1-904455-54-7, \$310 / £159

Essential reading for all researchers currently performing metagenomics studies and highly recommended for all students and scientists wishing to increase their understanding of this field.

Acanthamoeba

Biology and Pathogenesis

Author: **Naveed Khan**

viii + 290 pp., Feb. 2009

ISBN 978-1-904455-43-1 \$310 / £150

This book provides the first comprehensive review of *Acanthamoeba* research to be published. Everything that is known about *Acanthamoeba* is critically reviewed and divided into easy-to-follow sections. Essential!

Leishmania

After The Genome

Editors: **Peter J. Myler and Nicolas Fasel**

xiv + 306 pp., April 2008

ISBN 978-1-904455-28-8 \$300 / £150

Topics include: diagnosis and epidemiology, genome structure and content, regulation of gene expression, the *Leishmania* proteome, the *Leishmania* metabolome, *Leishmania* differentiation, interaction with the sand fly vector, drug discovery, drug resistance, and much more.

Molecular Phylogeny of Microorganisms

Edited by: **Aharon Oren and R. Thane Papke**

c. 225 pp., July 2010

ISBN: 978-1-904455-67-7, \$310 / £159

In this book, expert authors describe the different approaches applied today to elucidate the molecular phylogeny of prokaryotes (and eukaryotic protists) and review current phylogenetic methods, techniques and software tools. Topics covered include: computational tools, multilocus sequence analysis, 16S rRNA phylogenetic trees, rooting of the universal tree of life, applications of conserved indels, lateral gene transfer, endosymbiosis and the evolution of plastids.

Nanotechnology in Water Treatment Applications

Edited by: **T. E. Cloete, M. de Kwaadsteniet, M. Botes and J. M. López-Romero**

c. 200 pp., June 2010

ISBN: 978-1-904455-66-0, \$310 / £159

In this timely volume, topics covered include the detection of microbial pathogens, nanofibers and nanobiocides in water purification, nanozymes for biofilm removal, water and wastewater treatment and reverse osmosis. Also included is a chapter dedicated to the health and environmental concerns for the use of nanotechnology in water treatment.

Lab-on-a-Chip Technology

Edited by: **K. E. Herold and A. Rasooly**

Vol 1: Fabrication and Microfluidics

xiv + 410 pp., August 2009

ISBN 978-1-904455-46-2, \$310/£150

Vol 2: Biomolecular Separation and Analysis

xii + 300 pp., August 2009

ISBN 978-1-904455-47-9, \$310/£150

Other Books of Interest

- Iron Uptake and Homeostasis in Microorganisms
- Sensory Mechanisms in Bacteria
- Insect Virology
- Bifidobacteria: Genomics and Molecular Aspects
- Pili and Flagella: Current Research and Future Trends
- Real-Time PCR: Current Technology and Applications
- RNA Interference & Viruses: Current Innovations & Future Trends
- Lentiviruses and Macrophages: Molecular & Cellular Interactions
- Microbial Toxins: Current Research and Future Trends
- Plant Pathogenic Bacteria: Genomics and Molecular Biology
- Foodborne Pathogens: Microbiology and Molecular Biology
- Epigenetics
- RNA & the Regulation of Gene Expression
- ABC Transporters in Microorganisms
- Bacterial Polysaccharides: Current Innovations & Future Trends
- Microbial Production of Biopolymers and Polymer Precursors

Full Information on these and all our books at
www.caister.com