Bacterial Pathogenesis
Molecular and Cellular Mechanisms
Edited by: Camille Locht and Michel Simonet (Lille, France)
x + 370 pp, Jan 2012, $360/£180

Distinguished scientists from eight different countries and three continents, under the expert guidance of the editors Camille Locht and Michel Simonet, overview the molecular and cellular mechanisms of bacterial pathogenesis. The fifteen chapters are organized into five sections: approaches to the study of bacterial pathogenesis; bacterial adhesion to the cell surface and extracellular matrix of host tissues; poisoning the host by toxins; cellular invasion by bacterial pathogens; and bacterial evasion of host defences. The authors comprehensively describe the most relevant and up-to-date information on pathogenic features across the bacterial world. Aimed at the entire scientific community from students to senior scientists and physicians, the book is relevant to a broad range of people interested in the mechanisms of bacterial infectious diseases and is a recommended text for all microbiology laboratories.

Microbial Biofilms
Current Research and Applications
Edited by: Gavin Lear and Gillian D. Lewis (New Zealand)
c. 240 pp, Feb 2012, $319/£159
ISBN: 978-1-904455-96-7

Leading scientists provide an up-to-date review of the latest scientific research on these fascinating microbial communities and predict future trends and growth areas in biofilm-related research. Under the expert guidance of the editors Gavin Lear and Gillian Lewis, authors from around the world have contributed critical reviews on the most topical aspects of current biofilm research. Subjects covered include quorum sensing and social interactions in microbial biofilms, biofilms in disease, plant-associated biofilms, biofilms in the soil, applications in bioremediation, biofilms in wastewater treatment, corrosion and fouling, aquatic biofilms, microbial fuel cells, and catalytic biofilms. The book is essential for everyone interested in biofilms and their applications. It is also highly recommended for environmental microbiologists, soil scientists, medical microbiologists, bioremediation experts and microbiologists working in biocorrosion, biofouling, biodegradation, water microbiology, quorum sensing and many other areas.

Bacterial Glycomics
Current Research, Technology and Applications
Edited by: Christopher W. Reid, S.M. Twine, and A.N. Reid (USA)
c. 260 pp, Feb 2012, $31/£159
ISBN: 978-1-904455-95-0

Glycomics, the study of glycoconjugate assembly and expression in biological systems, is important in many areas of microbiology. Because glycans play such diverse roles in bacterial physiology, the field of bacterial glycomics is indispensable for the understanding of bacterial pathogenesis, metabolism and cell communities. Progress in bacterial glycomics is advancing rapidly due to improvements in analytical methodologies and the development of new and innovative approaches for glycan isolation, characterization and synthesis. Research in bacterial glycomics could lead to the development of novel drugs, bioactive glycans and glycoconjugate vaccines.

Written by a team of acknowledged experts, this book provides an up-to-date overview of our current understanding of bacterial glycans, describes the main analytical methods in use and discusses recent and novel applications. The book is divided into three sections. The first section includes overviews of microbial glycoconjugates, lipopolysaccharide, capsular polysaccharide, lipocarabinomannan biosynthesis, cell wall metabolism, and glycosylation of bacterial and archaeal proteins. The second section reviews the analytical approaches used in the characterization of the bacterial glycoblast. The final section describes applications of bacterial glycomics, including metabolic oligosaccharide labeling, the synthesis of bioactive glycans and the potential for glycoconjugate vaccines.

Essential reading for microbiologists working in polysaccharide and carbohydrate research, the book is also recommended for carbohydrate experts, microbiologists, immunologists and researchers in many other fields of life sciences.
Extremophiles
Microbiology and Biotechnology
Edited by: RP Anitori
c. 260 pp, March 2012
Current and topical areas of extremophile research. The latest insights into the mechanisms these fascinating organisms use to survive and the most recent and novel biotechnological uses of extremophiles.

Metagenomics
Current Innovations and Future Trends
Edited by: D Marco
xii + 296 pp, September 2011
ISBN: 978-1-904455-87-5, $319/£159
Innovative and recent advances in theoretical, methodological and applied areas. For researchers and environmental managers, students and teachers.

Nitrogen Cycling in Bacteria
Molecular Analysis
Edited by: JW Moir
x + 250 pp, July 2011
ISBN: 978-1-904455-86-8, $319/£159
With contributions from expert authors from around the world, this excellent book provides comprehensive reviews of current nitrogen cycle research.

Helicobacter pylori
Edited by: L Boyanova
vi + 290 pp, July 2011
ISBN: 978-1-904455-84-4, $319/£159
Current knowledge and recent research for microbiologists, clinicians and advanced students working with Helicobacter and for those wishing to enter the field.

Microbial Bioremediation of Non-metals
Current Research
Edited by: A-I Koukkou
x + 280 pp, July 2011
ISBN: 978-1-904455-83-7, $319/£159
An essential reference resource for everyone interested in the bioremediation of organic pollutants.

Lactic Acid Bacteria and Bifidobacteria
Current Progress in Advanced Research
Edited by: K Sonomoto, A Yokota
x + 286 pp, July 2011
ISBN: 978-1-904455-82-0, $319/£159
Essential reading for every researcher working with LAB, bifidobacteria and probiotics, from the PhD student to the experienced scientist.

Streptomyces
Molecular Biology and Biotechnology
Edited by: P Dyson
xii + 258 pp, March 2011
ISBN: 978-1-904455-77-6, $319/£159
Recent research and development in streptomycetes genomics, physiology and metabolism research. "a must-read" (David A. Hopwood, John Innes Centre, UK); "a major reference" (Doodys); comprehensive, up-to-date" (Microbiol. Today)

Vaccine Design
Innovative Approaches and Novel Strategies
Edited by: R Rappuoli, F Bagnoli
xii + 380 pp, February 2011
Cutting-edge research in vaccine design and development. Essential reading. "valuable information" (Doodys); "high-quality illustrations" (Ref. Res. Book News); "recommended" (Microbiol. Today)

Emerging Trends in Antibacterial Discovery
Answering the Call to Arms
Edited by: AA Miller, PF Miller
viii + 236 pp, January 2011
ISBN: 978-1-904455-72-1, $319/£159
Control, optimize and troubleshoot PCR, reverse transcriptase PCR, real-time PCR and quantitative PCR. An essential book. "an essential book ... a valuable tool to all those interested in PCR" (Doodys); "an essential guide" Aus. J. Med. Sci.