Lactobacillus Molecular Biology
From Genomics to Probiotics

Edited by: Åsa Ljungh and Torkel Wadström
Lund University, Faculty of Medicine, Sweden

Published: January 2009. Pages: x + 206
Published by: Caister Academic Press www.caister.com

Lactobacillus is a genus of Gram-positive facultative anaerobic or microaerophilic bacteria. In humans they are symbiotic and are found in the gut flora. Lactobacillus species are used for the production of yogurt, cheese, sauerkraut, pickles, beer, wine, cider, kimchi, chocolate and other fermented foods, as well as animal feeds such as silage. In recent years much interest has been shown in the use of lactobacilli as probiotic organisms and their potential for disease prevention in humans and animals.

This major new work focuses on recent research on the molecular biology and genomics of Lactobacillus. Written by an international team of scientists the volume is an essential reference for all medical researchers, dairy technologists, microbiologists and biotechnologists in the academic and industrial sectors. Topics covered include phylogenetics, taxonomy, comparative genomics, functional genomics, the intestinal microflora, surface proteins, stress responses, interaction with the immune system, probiotics, anti-cancer potential, and much more. Essential reading for all scientists involved with lactic acid bacteria or probiotic research and a recommended book for all microbiology laboratories.

Chapter 1. History of Probiotics and Living Drugs. Åsa Ljungh and Torkel Wadström
Chapter 2. Phylogenetics and Taxonomy. Effie Tsakalidou, G. Huys and Bruno Pot
Chapter 3. Comparative and Functional Genomics of the Genus Lactobacillus. Jan-Peter Van Pijkeren and Paul W. O'Toole
Chapter 4. Studies of the Intestinal Microflora by Traditional, Functional and Molecular Techniques. Elisabeth Norin, Cecilia Jernberg, Hans-Olof Nilsson and Lars Engstrand
Chapter 5. Surface Proteins of Lactobacillus Involved in Host Interactions. Jenni Antikainen, Timo K. Korhonen, Veera Kuparinen, Takahiro Toba and Stefan Roos
Chapter 6. Lactobacillus Stress Responses. Graciela L. Lorca and Graciela Font de Valdez
Chapter 7. Interactions of Lactobacillus with the Immune System. Denny Demeria and Karen Madsen
Chapter 8. Lactic Acid Bacteria: Probiotics With Anti-Cancer Activities. Chandra Iyer and James Versalovic
Chapter 9. Lactobacillus in the Gastrointestinal Tract. John Keohane, Kieran Ryan and Fergus Shanahan
Chapter 10. Lactobacillus in the Vagina: Why, How, Which Ones and What Do They Do?. Gregor Reid
Chapter 11. From Probiotics, Prebiotics and Synbiotics to Living Drugs. Åsa Ljungh, Torkel Wadström

Order from:
MALDI-TOF Mass Spectrometry in Microbiology
Edited by: Markus Kostrzewa and Sören Schubert (Published: 2016)

Aspergillus and Penicillium in the Post-genomic Era
Edited by: Ronald P. de Vries, Isabelle Benoit Gelber and Mikael Rødam Andersen (Published: 2016)

The Bacteriocins: Current Knowledge and Future Prospects
Edited by: Robert L. Dorit, Sandra M. Roy and Margaret A. Riley (Published: 2016)

Omics in Plant Disease Resistance
Edited by: Vijai Bhadauria (Published: 2016)

Acidophiles: Life in Extremely Acidic Environments
Edited by: Raquel Quatrini and D. Barrie Johnson (Published: 2016)

Climate Change and Microbial Ecology: Current Research and Future Trends
Edited by: Jürgen Marxsen (Published: 2016)

Biofilms in Bioremediation: Current Research and Emerging Technologies
Edited by: Gavin Lear (Published: 2016)

Microalgae: Current Research and Applications
Edited by: Maria-Nefeli Tsaloglou (Published: 2016)

Gas Plasma Sterilization in Microbiology: Theory, Applications, Pitfalls and New Perspectives
Edited by: Hideharu Shintani and Akikazu Sakudo (Published: 2016)

Virus Evolution: Current Research and Future Directions
Edited by: Scott C. Weaver, Mark Denison, Marilyn Roossinck and Marco Vignuzzi (Published: 2016)

Arboviruses: Molecular Biology, Evolution and Control
Edited by: Nikos Vasilakis and Duane J. Gubler (Published: 2016)

Shigella: Molecular and Cellular Biology
Edited by: William D. Picking and Wendy L. Picking (Published: 2016)

Aquatic Biofilms: Ecology, Water Quality and Wastewater Treatment
Edited by: Anna M. Romani, Helena Guasch and M. Dolors Balaguer (Published: 2016)

Alphaviruses: Current Biology
Edited by: Suresh Mahalingam, Lara Herrero and Belinda Herring (Published: 2016)

Thermophilic Microorganisms
Edited by: Fu-Li Li (Published: 2015)

Flow Cytometry in Microbiology: Technology and Applications
Edited by: Martin G. Wilkinson (Published: 2015)
“an impressive group of experts” (ProtoView)

Probiotics and Prebiotics: Current Research and Future Trends
Edited by: Koen Venema and Ana Paula do Carmo (Published: 2015)

Epigenetics: Current Research and Emerging Trends
Edited by: Brian P. Chadwick (Published: 2015)
“this is one text you don't want to miss” (Epigenie); "up-to-date information" (ChemMedChem)

Corynebacterium glutamicum: From Systems Biology to Biotechnological Applications
Edited by: Andreas Burkovski (Published: 2015)
“Without question a valuable book” (BIOSpektrum)

Advanced Vaccine Research Methods for the Decade of Vaccines
Edited by: Fabio Bagnoli and Rino Rappuoli (Published: 2015)