

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

Hardback: ISBN 978-1-904455-41-7 £159, \$319

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:

Caister Academic Press, c/o Book Systems Plus <http://www.caister.com/order>

☞ **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 Rørdam 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. Romání, 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)