

Helicobacter pylori

Molecular Genetics and Cellular Biology



Edited by: **Yoshio Yamaoka**

Michael E. DeBakey Veterans Affairs Medical Center, TX 77030, USA

Published: July 2008. **Pages:** x + 262

Hardback: ISBN 978-1-904455-31-8 £159, \$319

Published by: Caister Academic Press www.caister.com

Helicobacter pylori is an important human pathogen that infects up to 50% of the human population. As the leading cause of peptic ulcers, gastritis and gastric cancer worldwide, the organism has been the subject of intensive research to unravel the mysteries of its genetics and cellular biology. In fact the number of publications in this field has risen dramatically in recent years making it extremely difficult for even the most diligent reader to stay abreast of progress. This book distills the most important cutting-edge findings in the field to produce a timely and comprehensive review. With contributions from leading international helicobacter researchers, topics include: lipopolysaccharides, outer membrane proteins, motility and chemotaxis, type IV secretions systems, metal metabolism, molecular mechanisms of host adaptation, genotyping, and proteomics.

A useful introduction to the subject for new researchers and an invaluable reference for the experienced researcher, this book is essential reading for all researchers working with *Helicobacter* and related organisms.

Chapter 1. Overview. *Yoshio Yamaoka*

Chapter 2. *Helicobacter pylori* Lipopolysaccharides and Lewis Antigens. *Anthony P. Moran and M. Stephen Trent*

Chapter 3. *Helicobacter pylori* Outer Membrane Proteins. *Yoshio Yamaoka and Richard A. Alm*

Chapter 4. *Helicobacter* Flagella, Motility and Chemotaxis. *Melanie Rust, Tobias Schweinitzer, and Christine Josenhans*

Chapter 5. *Helicobacter pylori* Vacuolating Toxin. *Steven R. Blanke and Timothy L. Cover*

Chapter 6. Type IV Secretion Systems in *Helicobacter pylori*. *Wolfgang Fischer, Arno Karnholz, Luisa F. Jimenez-Soto and Rainer Haas*

Chapter 7. Gastric Biology of *Helicobacter pylori*. *George Sachs, Yi Wen and David R. Scott*

Chapter 8. Metal Metabolism and Transport in *Helicobacter pylori*. *Jeroen Stoof, Clara Belzer, Arnoud H.M. van Vliet*

Chapter 9. Replication, Partitioning, Segregation, and Cell Division in *Helicobacter pylori*. *Teruko Nakazawa and Hiroaki Takeuchi*

Chapter 10. Molecular Mechanisms of Host-adaptation in *Helicobacter*. *Stephan C. Schuster, Nicola E. Wittekindt and Bodo Linz*

Chapter 11. Genotyping of *Helicobacter pylori* and its Host: Microarray Based Insights on Gene Variation, Expression and Function. *Olivier Humbert, Delia M. Pinto-Santini and Nina R. Salama*

Chapter 12. The Application of Proteomics Technology to *Helicobacter pylori*-associated Gastrointestinal Disease: State-of-the-Art and Future Clinical Potentials. *Ming-Shiang Wu, Lu-Ping Chow, Jaw-Town Lin and Shyh-Horng Chiou*

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)