

Archaea

Evolution, Physiology, and Molecular Biology

EDITED BY

Roger A. Garrett and Hans-Peter Klenk

Introduced by Crafoord Prize winner Carl Woese, this volume combines reviews of the major developments in archaeal research over the past 10–15 years with more specialized articles dealing with important recent breakthroughs. Drawing on major themes presented at the June 2005 meeting held in Munich to honor the Archaea pioneers Wolfram Zillig and Karl O. Stetter, the book provides a thorough survey of the field from its controversial beginnings to its ongoing expansion to include aspects of eukaryotic biology.

The editors have assembled articles from the premier researchers in this rapidly burgeoning field, including an account by Carl Woese of his original discovery of the Archaea (until 1990 termed archaebacteria) and the initially mixed reactions of the scientific community. The review chapters and specialized articles address the emerging significance of the Archaea within a broader scientific and technological context, and include accounts of cutting-edge research developments. The book spans archaeal evolution, physiology, and molecular and cellular biology and will be an essential reference for both graduate students and researchers.

Roger A. Garrett is a Professor at Copenhagen University, where he leads the Danish Archaea Center. He has worked previously at different European Universities and Research Institutes including: University College, London, the MRC Biophysics Unit at Kings College, London, the University of Leiden, the Max Planck Institute of Molecular Genetics, Berlin and the University of Aarhus, as well as at the University of California, Santa Cruz. He became deeply engaged with Archaea soon after their initial discovery, through a shared interest (with Professor Carl Woese) in 16S ribosomal RNA structure and function, and he has since made significant and diverse contributions to the molecular biology and genomics of the Archaea.

Hans-Peter Klenk teaches microbial genomics at Darmstadt Technical University and is the founder and general manager of e.gene Biotechnologie, located in the Munich area. He has more than 25 years of experience in Archaea research, starting with the molecular biology and evolution of the archaeal transcription apparatus (with Professor Wolfram Zillig), and later pioneering archaeal genomics in various positions at Dalhousie University, Halifax (Canada), The Institute for Genomics Research, Rockville (USA), and the University of Goettingen (Germany). He has co-organized more than 25 national and international meetings, including Archaea – The First Generation in 2005.

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