

Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci

Edited by Gary M. Dunny, *University of Minnesota, St. Paul*;
P. Patrick Cleary, *University of Minnesota Medical School, Minneapolis*;
and Larry L. McKay, *University of Minnesota, St. Paul*

This new book summarizes the current state of streptococcal genetics research being conducted by microbial geneticists and medical, dental, veterinary, and food microbiologists around the world. Its intended audience includes researchers and educators working in the above disciplines and scientists developing and applying this research in the food, pharmaceutical, biotechnological, and vaccine industries.

Also presented is valuable reference information on genetic techniques such as electroporation, cloning vectors, and other essential guidance for researchers working on streptococci and other gram-positive bacteria.

This book had its origin in the 3rd International ASM Conference on Streptococcal Genetics, June 1990.

Condensed Contents

- I. Gene Transfer (11 chapters by *Clewett et al.*, *Dunny et al.*, *Horaud et al.*, *Trieu-Cuot et al.*, *Scott*, *Wirth et al.*, *Clewett et al.*, *Rothschild et al.*, *Vijayakumar et al.*, *Hodel-Christian et al.*, *Pozzi et al.*)
- II. Molecular and Genetic Analysis of Pneumococci (7 chapters by *Hui et al.*, *Prudhomme et al.*, *Lacks et al.*, *López et al.*, *Boulnois et al.*, *Yöther et al.*, *Hakenbeck et al.*)
- III. Lactococci: Molecular Biology and Biotechnology (9 chapters by *Kok*, *Davidson et al.*, *Steen and Hansen*, *de Vos et al.*, *Chopin et al.*, *Klaenhammer et al.*, *Coffey et al.*, *Xu et al.*, *Bourgeois et al.*)
- IV. Structure and Evolution of the M-Protein Gene Family (7 chapters by *Cleary et al.*, *Schneezind et al.*, *Lindahl et al.*, *Timoney et al.*, *Poirier et al.*, *Kehoe et al.*, *Hollingshead et al.*)
- V. Extracellular Products of Pathogenic Streptococci: Genetics and Regulation (12 chapters by *Rubens et al.*, *Malke and Ferretti*, *Johnston et al.*, *Hauser et al.*, *Ferretti et al.*, *Gilmore*, *Michel et al.*, *Wessels et al.*, *Wennerstrom et al.*, *Golubkova et al.*, *Suzoroc et al.*, *Suzoroc and Ferretti*)

VI. Molecular Biology of Oral Streptococci (12 chapters by *LeBlanc and Lee*, *Fices-Taylor et al.*, *Russell et al.*, *Maerina et al.*, *Kuramitsu et al.*, *Sun et al.*, *Hudson and Curtiss*, *Gilbert et al.*, *Burne et al.*, *Banas and Gilmore*, *Jenkinson*, *Hantman et al.*)

Ordering information: June 1991, Hardcover (ISBN 1-55551-034-9), 315 pages, illustrated, index. Member: \$59.00; Nonmember: \$69.00. When ordering, specify order number below. All orders must be prepaid in U.S. dollars drawn on a U.S. bank or charged to MasterCard, VISA, American Express, or Eurocard. Members are limited to three copies at the member price. Institutional purchase orders should include the order number. Charge card orders may also be placed by telephone [(202) 737-3600] or by fax [(202) 737-0368].

Please send me _____ copy(ies) of *Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci* at \$59.00 (Member) or \$69.00 (Nonmember) each, order number AEM 7 91-034-9.

Check method of payment: Check Enclosed
 Charge to my MasterCard VISA
 American Express Eurocard

Card Number _____ Expires _____

Signature _____ Date _____

Member Number _____

Ship to:

Name _____

Address _____

City State Zip or Postal Code _____

Country _____

Send information about ASM Membership

ASM

Publications Sales
American Society for Microbiology
1325 Massachusetts Ave., N.W.
Washington, DC 20005-4171

MICROBIAL MATS

Physiological Ecology of Benthic Microbial Communities



Editors: **YEHUDA COHEN**, *Interuniversity Institute of Eilat, Eilat, and*
EUGENE ROSENBERG, *Tel Aviv University, Ramat Aviv, Israel*

Microbial mats are probably the oldest form of life on earth as witnessed in the fossil record. They are common in a large spectrum of environments and play a key role in elemental transformations. Microbial mats pose interesting evolutionary questions now being addressed through comparative physiology and analysis of molecular structure, and benthic microbial mats provide fascinating ecosystems for the study of microbial adhesion, growth and development at interfaces, cell-to-cell interactions, and metabolic interlock among closely interacting microbial communities.

This book focuses on microbial processes in microbial mats and their interaction with the environment of deposition. It is based on an international conference held in Eilat, Israel, in September 1987.

CONDENSED CONTENTS

- I. Environments of Depositions** (8 chapters by Ward et al., Belkin and Jannasch, Cohen, Guerrero and Mas, Zohary, Oren, de Winder et al., and Lazar et al.)
- II. Structure and Function of Benthic Microbial Communities** (9 chapters by D'Amelio et al.,

Dor and Paz, Jørgensen, Palmisano et al., Revsbech et al., Ghiorse, Skyring et al., Oremland and King, and Des Marais et al.)

- III. Regulation of Adhesion and Hydrophobicity of Cell Surfaces in the Formation of Microbial Mats** (6 chapters by Shilo, Bar-Or et al., Rosenberg et al., Low and White, Marshall, and Rosenberg)
- IV. Physiology of Major Mat-Building Microorganisms** (10 chapters by Stal et al., Padan, Caumette, Post et al., van Gemerden and de Wit, de Wit and van Gemerden, Paerl et al., Truper and Galinski, Kuenen, and Wimpenny)
- V. Evolution of Mat-Forming Photosynthetic Procarvates** (3 chapters by Avron, Turner et al., and Pierson and Olson)
- VI. Biogeochemistry of Microbial Mats** (4 chapters by Aizenshtat, Ward et al., Fredrickson et al., and Knoll)

Hardcover (ISBN 1-55581-002-0)

Publication date: March 1989

511 pages, illustrated, color plates, index

This is my order for Microbial Mats.

Check price	Quantity	Total Cost
<input type="checkbox"/> Member: \$65.00	× _____ =	\$ _____
<input type="checkbox"/> Nonmember: \$87.00	× _____ =	\$ _____

If ordering at the member price, give member number: _____

Check payment method

Payment enclosed

MasterCard Card number: _____

Visa Expires: _____

American Express Signature: _____

Please print or type mailing information

AEM 7:91

Name _____
Address _____
City _____ State/province _____
Zip/postal code _____ Country _____

Send to:

Publication Sales
ASM American Society for Microbiology
1325 Massachusetts Avenue, N.W.
Washington, DC 20005

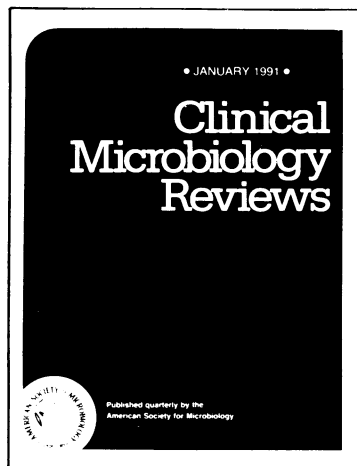
Prices subject to change without notice. Limit of 3 copies at the member price.

Behind in your reading? ASM review journals can help.

Clinical Microbiology Reviews

Editor: Josephine A. Morello

Editorial Board: Joseph M. Campos, Judith E. Damer, Prabhavathi B. Fernandes, Lynne Garcia, Timothy E. Kiehn, Kenneth J. Ryan, Thomas F. Smith, and Kenneth D. Thompson



Quarterly, 600 pages. ISSN 0893-8512.

Announcing ASM's first new review journal in 50 years! Since its debut in January 1988, *Clinical Microbiology Reviews* has enjoyed an enthusiastic response from clinical workers and researchers around the world, reaching a subscription base well over 8,000 by its fourth year. One reason for CMR's immediate success is the tremendous need of the scientific and medical community for timely and authoritative reviews of the most important developments in all aspects of clinical microbiology. The reviews are written and edited to be very useful not only to laboratory directors and infectious disease specialists but to all workers, including bench technologists.

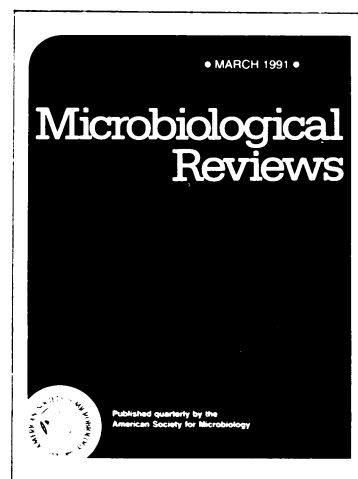
Topic areas addressed in CMR include **new diagnostic laboratory technology, specific pathogens or groups of pathogens, clinical and laboratory aspects of infections, and antimicrobial agents and their applications.**

Microbiological Reviews

Editor: W. K. Joklik

Editorial Board: R. John Collier, Franklin M. Harold, Alan G. Hinnebusch, Frederick C. Neidhardt, Catherine L. Squires, Eric J. Stanbridge, James T. Staley, and Olen C. Yoder

Reading *Microbiological Reviews* is one of the best ways to keep abreast of significant developments and to broaden one's basic knowledge across all areas of microbiology and immunology. Established since 1937 as the definitive review journal, *Microbiological Reviews* publishes timely and authoritative in-depth reviews to serve the interests of all microbiologists. Of the thousands of journals and serial publications in science, *Microbiological Reviews* enjoys the second highest impact factor in terms of number of citations per article, second only to the *Annual Review of Biochemistry* (from *I.S.I. Science Citation Index*).



Quarterly, 650 pages. ISSN 0146-0749.

Please enter my 1991 subscription to the journal(s) indicated below.

Quantity	Title	Nonmember (US)	Nonmember (foreign)	Member (US)	Member (foreign)	Optional foreign airmail surcharge	Total Amount
_____	Clinical Microbiology Reviews	\$115	\$125	\$20	\$32	\$35	\$_____
_____	Microbiological Reviews	\$115	\$125	\$20	\$32	\$35	\$_____

Check payment method

- Payment enclosed
- MasterCard Card number
- VISA Expiration Date
- American Express Signature

_____ ASM Member number (if applicable)

Name

AEM 7 91

Address

City

State/province

Country

Zip/postal code

Send to: Finance Department, American Society for Microbiology, 1325 Massachusetts Ave., N.W., Washington, DC 20005

Genetics and Molecular Biology of Industrial Microorganisms

Editors: **Charles L. Hershberger** and **Stephen W. Queener**, *Eli Lilly & Co., Indianapolis, Indiana*, and **George Hegeman**, *Indiana University, Bloomington*

This far-reaching volume has been produced in recognition of recent advances in our understanding of bacterial and nonbacterial microbial systems in industry, including a great deal of new interest in products of eucaryotic microorganisms, and of the true industrial status of recombinant organisms. It brings together the work of leading researchers moving to maximize the industrial potential of recombinant DNA technology. The contents, summarized below, are based on the Fourth ASM Conference on the Genetics and Molecular Biology of Industrial Microorganisms (popularly known as the "Bloomington Conference"), held in 1988.

CONDENSED CONTENTS

- I. **Perspectives with Industrial Microorganisms** (4 chapters by Demain, Hopwood, Cundliffe, and Archer et al.)
- II. **Biosynthesis of Macrocyclic Lactones** (4 chapters by Epp et al., Richardson et al., Streicher et al., and Donadio et al.)
- III. **Genes for Antibiotic Resistance and Biosynthesis** (4 chapters by Mansouri et al., Strohl et al., Donovan et al., and Suárez et al.)
- IV. **Genes for Developmental and Biosynthetic Pathways** (4 chapters by Chater, Champness et al., Schottel et al., and Tiraby et al.)
- V. **Genetic Structure and Plasticity in Streptomyces** (4 chapters by Cullum et al., Schrempl et al., Kinashi, and Hershberger et al.)
- VI. **Genetic Analysis and Manipulation in Streptomyces** (4 chapters by Stuttard, Baltz and McHenney, Chung and Crose, and Beckmann et al.)
- VII. **Applications of Dividing Bacteria** (4 chapters by Lazarus et al., Wubbolts and Timmis, DeVault et al., and Reeve)
- VIII. **Heterologous Protein Products from Cell Culture** (2 chapters by Kellems et al. and Grinnell et al.)
- IX. **Molecular Studies in β -Lactam-Producing Fungi and Streptomyces** (5 chapters by Jensen et al., Miller and Ingolia, Peñalva et al., Veenstra et al., and Baldwin et al.)
- X. **Molecular Biology and Regulation in Filamentous Fungi** (5 chapters by Marzluf and Fu, Ward, Finkelstein et al., Devchand et al., and Hynes and Andrianopoulos)
- XI. **Expression of Heterologous Proteins in Yeasts** (5 chapters by Meyhack et al., Thim et al., Bitter, Shuster et al., and Cregg et al.)

Please send me *Genetics and Molecular Biology of Industrial Microorganisms*.

Publication date: September 1989.
Approximately 390 pages, illustrated, indexes.
Hardcover (ISBN 1-55581-010-1)

Check Price	Quantity	Total Cost
<input type="checkbox"/> Member: \$39.00	× _____	= \$ _____
<input type="checkbox"/> Nonmember: \$54.00	× _____	= \$ _____

If ordering at the member price, give member number:

Check Payment Method

AEM 7/91

Payment enclosed

MasterCard

Card number _____

VISA

Expiration Date _____

American Express

Signature _____

Please Print or Type Mailing Information

Name _____

Address _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____



Send to:

Publication Sales, American Society for Microbiology
1325 Massachusetts Avenue, N.W., Washington, DC 20005

ADP-Ribosylating Toxins and G Proteins

Insights into Signal Transduction

Edited by **Joel Moss** and **Martha Vaughan**, *National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland*

The contents of this important synthesis and the expert contributors span the disciplines of microbiology, biochemistry, molecular biology, and pharmacology to review current knowledge about ADP-ribosylating toxins, guanine nucleotide-binding proteins, receptors, and signal transduction. Recombinant DNA technology has been applied to elucidate the molecular basis of action of these bacterial toxins, which are responsible in part for the syndromes characteristic of a number of infectious diseases.

This book will very effectively update interested scientists and students on the current status of research into ADP-ribosylating toxins and related topics and will point the way for future advances.

CONDENSED CONTENTS

I. Bacterial ADP-Ribosyltransferases: Toxins and Related Proteins (9 chapters by Collier, Bodley and Veldman, Wick and Iglewski, U. Aktories and Just, Aktories et al., Mekalanos and DiRita, Fishman, and Murphy and Strom)

II. Guanine Nucleotide-Binding Proteins Coupled to Signal Transduction in Animal Cells (13 chapters by Raymond et al., Kaziro, Spiegel, Birnbaumer et al., De Vivo and Gershengorn, Snyderman et al., Serventi et al., Manning, Gautam and Simon, Gibbs et al., Price et al., Takai et al., and Boback et al.)

III. ADP Ribosylation in Bacteria and Animal Cells (6 chapters by Lowery and Ludden, Jacobson et al., Williamson and Moss, Iglewski and Fendrick, Ueda, and Miwa and Sugimura)

Hardcover (ISBN 1-55581-017-9)
March 1990

585 pages, illustrated, color plate, index

To order, complete the form below and mail to ASM. Institutional purchase order forms should include the catalog number below. Credit card orders for ASM books may also be placed by phone (202-737-3600) or by fax (202-737-0368).

Please send me **ADP-Ribosylating Toxins and G Proteins** (catalog number AEM 7 91 017 9).

Check payment method

Payment enclosed
 MasterCard Card number: _____
 Visa Expiration date: _____
 American Express Signature: _____

Check price	Quantity	Total cost
Member: \$69.00	_____	= \$_____
Nonmember: \$79.00	_____	\$_____

If ordering at member price, give member number:

Please print or type mailing information

Name _____
Address _____
City _____ State/Province _____
Zip/Postal code _____ Country _____

Send to:

ASM

Publication Sales
American Society for Microbiology
1325 Massachusetts Avenue, N.W.
Washington, DC 20005

n two volumes, the current "last word" on bacterial nomenclature from *Acetobacter* to *Zymomonas*.....



APPROVED LISTS OF BACTERIAL NAMES
AND
INDEX OF THE BACTERIAL AND YEAST NOMENCLATUREAL CHANGES

(Amended Edition)

**V. B. D. Skerman, Vicki McGowan,
and P. H. A. Sneath**

Published in the *International Journal of Systematic Bacteriology* since the 1980 *Approved Lists of Bacterial Names* (1 January 1980 to 1 January 1989)

W. E. C. Moore and Lillian V. H. Moore

ORIGINALLY PUBLISHED in 1980 in the *International Journal of Systematic Bacteriology*, the *Approved Lists of Bacterial Names* includes all valid names of bacteria which, through 1979, had been adequately described and, if cultivable, for which there was a type, neotype, or reference strain available. It has been reproduced in hardcover with minor corrections and a more "user friendly" format. The *Index of the Bacterial and Yeast Nomenclatural Changes* is a new softcover adjunct volume to the *Approved Lists*, which provides a complete and orderly compilation of nomenclatural changes that have occurred from 1 January 1980 through 1 January 1989. These complementary volumes are not sold separately; they are available only as a set.

Every reference collection serving the life sciences should include this set.

December 1989.

Hardcover (ISBN 1-55581-014-4), 200 pages; plus softcover, 72 pages

Price per set: Member, \$40.00; Nonmember, \$55.00

When ordering, specify catalog number below.



Send me	and	(catalog No.	AEM 7/91-014-4).
(Check price/set)	(Quantity)	(Total cost)	Print or type mailing information.
Member, \$40	x _____	- \$ _____	Name _____
Nonmember, \$55	x _____	- \$ _____	Address _____
Member number: _____			City _____ State/Province _____
(Check payment method)			Country _____ Zip/Postal code _____
Payment enclosed	MasterCard	Visa	American Express
Card number: _____			Send to:
Expiration date: _____	Signature: _____		Publication Sales/American Society for Microbiology
			1325 Massachusetts Ave., NW / Washington, DC 20005-4171

Charge card orders for ASM books may be placed by telephone (202-737-3600) or fax (202-737-0368).

An elegant view of a complex macromolecule . . .

THE RIBOSOME

STRUCTURE, FUNCTION, & EVOLUTION

Edited by **Walter E. Hill**, *University of Montana, Missoula*; **Albert Dahlberg**, *Brown University, Providence, R.I.*; **Roger A. Garrett**, *University of Copenhagen, Copenhagen, Denmark*; **Peter B. Moore**, *Yale University, New Haven, Conn.*; **David Schlessinger**, *Washington University School of Medicine, St. Louis, Mo.*; and **Jonathan R. Warner**, *Albert Einstein College of Medicine, Bronx, N.Y.*

This comprehensive overview is a major new addition to literature on the ribosome, covering the structure, function, and evolution of this complex macromolecule in both prokaryotic and eukaryotic systems. The authors, an international group of leading experts representing 13 countries, have written and illustrated their chapters for use by all life scientists, including those outside the field.

The book opens with a personal, historical retrospective and summary by Masayasu Nomura, followed by historical insights on ribosome preparation by Alexander S. Spirin. From there, chapters turn to recent developments in every arena of research into the ribosome. Much of the current knowledge about the detailed mechanisms by which the ribosome is involved in protein biosynthesis has only recently been delineated thanks to a host of new research techniques. Additional information about how antibiotics and ribosomes interact and a view of the ribosome in its evolutionary context are also included.

Arising from the August 1989 International Conference on Ribosomes, this reference will be extremely useful to advanced students as well as investigators whose work either directly or indirectly touches on this subject.

CONDENSED CONTENTS

Historical (2 chapters by Nomura and Spirin). **Structure of Ribosomes and rRNA** (12 chapters by Noller et al.; Brimacombe et al.; Frank et al.; Boublík, Mandivan, and Timminia; Stöffler-Meilicke and Stöffler; Yonath et al.; Ehresmann et al.; Draper; Egebjerg, Larsen, and Garrett; Oakes et al.; Serdyuk et al.; and Wool et al.). **Probing rRNA Function** (4 chapters by Raué et al.; Tappich et al.; Cunningham et al.; and Hill et al.). **Initiation** (5 chapters by Van Knippenberg; Hartz, McPheeters, and Gold; Gualerzi et al.; Merrick; and Munroe and Jacobson). **Elongation** (8 chapters by Liljas; Rheinberger et al.; Zimmermann, Thomas, and Wöwer; Wintermeyer, Lill, and Robertson; Barta, Kuechler, and Steiner; Hardesty, Odom, and Czworkowski; Ehrenberg et al.; and Möller). **Termination** (2 chapters by Tate, Brown, and Kastner and Murgola et al.). **Ribosome Formation** (7 chapters by Nilsson et al.; Pace and Burgin; Srivastava and Schlessinger; Musters et al.; Warner et al.; Gerbi et al.; and Ware and Khanna-Gupta). **Antibiotic Mechanisms and Probes**

(3 chapters by Cundliffe; Cooperman, Weitzmann, and Fernández; and Ballesta and Lazaro). **Translational Fidelity** (6 chapters by Kurland et al.; Dix, Thomas, and Thompson; Weiss et al.; Buckingham et al.; Bogosian et al.; and Culbertson et al.). **Evolution of Ribosomes** (8 chapters by Gouy and Li; Lake; Gray and Schnare; Wittmann-Liebold et al.; Matheson et al.; Finlex, Bartel, and Varshavsky; Amils et al.; and Subramanian, Smooker, and Giese).

August 1990

Hardcover (ISBN 1-55581-020-9)

696 pages, large format, illustrated, color plates, index

To order, complete the form below and mail to ASM. Institutional purchase orders should include the offer number below. Credit card orders for ASM books may also be placed by phone (202-737-3600) or by fax (202-737-0368).

Please send me _____ copy(ies) of *The Ribosome* at _____ \$57.00 (Member) — \$104.00 (Nonmember) per copy (offer number AEM 7-91-020-9).

Member number (if applicable) _____

Check payment method:

Check enclosed

MasterCard VISA American Express

Card Number _____ Expires _____

Signature _____ Date _____

Complete shipping information:

Name _____

Address _____

City, State, Zip or Postal code _____

Country _____

Send to:

ASM

Publication Sales

American Society for Microbiology

1325 Massachusetts Avenue, N.W.

Washington, DC 20005-4171

Ever had the tables turned on you? If the answer is yes, you need the new



his newly revised and updated edition will assist every author who submits papers to ASM. Prepared by ASM's professional editorial staff specifically for the ASM journals and books, the manual incorporates all of the information you need to ensure stylistically and grammatically correct manuscripts.

The new edition includes two new chapters, "Proofreading" and "Books." In addition, it features in-depth instructions for assembling and editing the new References section, which recently replaced the Literature Cited section in ASM journal articles.

Publication Sales
American Society for Microbiology

CONTENTS

- 1. Preparation of Manuscripts
- 2. Numbers and Measurements
- 3. Scientific Nomenclature
- 4. English
- 5. Sources for Materials
- 6. Abbreviations
- 7. References
- 8. Illustrations
- 9. Tables
- 10. Proofreading
- 11. Books
- 12. Words, Abbreviations, and Designations
- Appendix A. Journal Specifications
- Appendix B. Journal Production Cycle
- Bibliography
- Index

Please send me the *ASM Style Manual for Journals and Books*. Publication date: June 1991. Softcover, 185 pages plus index, illustrated. Order no. AEM 7/91-S1991.

_____ copy(ies) at the member price of \$23.00.....\$ _____

_____ copy(ies) at the nonmember price of \$28.00.....\$ _____

Total amount of purchase:.....\$ _____

Check one: Payment enclosed MasterCard VISA American Express

Card Number _____ Name _____

Expires _____ Address _____

Signature _____ City, State/Province _____

Member number _____ Zip/Postal Code, Country _____

Send order to Publication Sales, American Society for Microbiology, 1325 Massachusetts Ave., NW, Washington, DC 20005-4171.