

Virus Attachment and Entry into Cells

Proceedings of an ASM Conference
Held in Philadelphia, Pennsylvania, 10-13 April 1985

Editors: Richard L. Crowell
Karl Lonberg-Holm

New findings on virus infection

Rapid progress in viral research has led to a better understanding of the vital area of virus infection of animal and human cells. *Virus Attachment and Entry into Cells* offers a major new insight into this evolving field.

The book provides a timely review of recent findings on the early stages of virus infection. Twenty-five articles are included, covering these important areas:

- Virion attachment proteins
- Cellular receptors
- Penetration and uncoating of viruses

Application of new technologies

The book begins with a brief overview of early events in virus infection. Applications of new biological insights and biochemical, genetic, and X-ray crystallographic technologies to the study of virus infection are examined.

Virus Attachment and Entry into Cells will be of major interest to virologists, immunologists, and others involved in the cross disciplines of microbiology, cell biology, and molecular biology.

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Keep up-to-date on the latest virus-receptor research. Order your copy of *Virus Attachment and Entry into Cells*.

Publication date: March 1986
216 pages, illustrated, index

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Molecular Aspects of Picornavirus Infection and Detection

Edited by **Bert L. Semler**, University of California, Irvine, and
Ellie Ehrenfeld, University of Utah Medical School, Salt Lake City

In the past two years, giant strides have been made in our knowledge of the molecular biology and structure of picornaviruses. The complete three-dimensional structures of rhinovirus and poliovirus have now been solved through X-ray crystallographic studies, yielding much important information about the antigenic regions of viral proteins and the relationship of viral structure to antibody accessibility, with important implications for vaccine design. These three-dimensional structures have provided new insight into the mechanism of action of several antiviral compounds.

This very timely book presents our current understanding of the biology of these viruses in the context of clinical implications. Virologists, molecular biologists, and clinical researchers will all find this book useful and interesting reading. Based on the 1988 ICN-UCI International Conference on Virology, Newport Beach, Calif.

CONDENSED CONTENTS

- I. Molecular Biology of Viral Replication**
(6 chapters)
- II. Virion Structure and Cell Surface Interactions**
(6 chapters)
- III. Genetic Determinants of Viral Disease and Applications to Diagnosis** (6 chapters)

Hardcover (ISBN 1-55581-009-8)
Publication date: March 1989
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*In-depth coverage of essentially
all mobile DNA systems*

Mobile DNA

Edited by **Douglas E. Berg**, Washington University School of Medicine, St. Louis, Missouri, and **Martha M. Howe**, University of Tennessee, Memphis

Mobile DNA presents a thorough examination of the remarkable ability of DNA to move to new sites, invert, and undergo deletion or amplification, generally without the extensive sequence homology needed for classical recombination. The 43 chapters, by a stellar group of authors, describe the great variety of mechanisms by which these rearrangements occur, how they are regulated, their biological consequences, and ways in which transposable elements can be exploited as potent research tools.

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Chapters variously reflect the sophisticated understanding of intensively studied elements and the tantalizing early findings of emerging elements or systems, and each chapter provides insights into the current state of our knowledge while pointing out future research directions.

This book will serve scientists with diverse interests and experience, from students just discovering the excitement and power of modern molecular genetics to teachers and senior researchers. Microbiologists, biochemists, molecular biologists, cell biologists, virologists, evolutionists, and geneticists all will find much to interest them here.

Hardcover (ISBN 1-55581-005-5)
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HIGH-TECHNOLOGY
ROUTE TO

WIRUS VACCINES

Editors:
Gordon R. Dreesman
Judith Gunn Bronson
Ronald C. Kennedy

*Proceedings of the First Annual Southwest Foundation
for Biomedical Research International Symposium,
Houston, Texas, 8-10 November 1984*

**Announcing a new reference
on virus vaccines**

High-Technology Route to Virus Vaccines is an authoritative, up-to-date account of the pre-eminent issues in immunization and of specific immunological phenomena. This comprehensive book begins with a historical perspective of the field and proceeds to review the most significant advances and methodologies in virus vaccines. Problems encountered in the introduction of new vaccines to the marketplace are examined.

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Virologists and immunologists will find *High-Technology Route to Virus Vaccines* a convenient source of information on the present status and future trends of virus vaccine research.

**Order your copy of this
informative publication today.**

Publication date: August 1985
180 pages, illustrated, index
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Genetic Recombination

Edited by
Raju S. Kucherlapati,
*University of Illinois College
of Medicine, Chicago, Illinois, and*
Gerald R. Smith, *Fred Hutchinson
Cancer Research Center, Seattle, Washington*

Genetic Recombination presents molecular, biochemical, and biological perspectives on recombination, especially homologous recombination, as well as site-specific recombination and so-called illegitimate recombination (in which integration of DNA sequences is achieved without apparent regard to sequence or position homology). The process of recombination is described for bacteria and bacteriophage, yeasts, *Drosophila*, and cultured mammalian cells. Several chapters also deal with the biological consequences of genetic recombination including recombinational control of gene expression and production of chromosomal abnormalities leading to malignancy and birth defects.

This well-integrated treatise will be of interest and value to researchers and students focusing on prokaryotic and eukaryotic genetic recombination and on related topics such as gene expression, protein-DNA interactions, chromosome mechanics, meiosis, gene therapy, and DNA repair.

To order *Genetic Recombination*, contact the **Publication Sales Office, American Society for Microbiology, 1325 Massachusetts Avenue, N.W., Washington, DC 20005**

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743 pages, illustrated, index.

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THE BACTERIAL CHROMOSOME

Edited by **Monica Riley**, *Marine Biological Laboratory, Woods Hole, Massachusetts*, and **Karl Drlica**, *Public Health Research Institute and New York University School of Medicine, New York, New York*

This unique volume reviews current research at the forefront of investigation into the structure and function of the bacterial chromosome, summarizes the foundations of this research in previous work, and provides insights into future trends and directions. The need for such a compilation became apparent to many leading experts who assembled at a 1988 ASM conference. From there, the project soon expanded into an ambitious review encompassing perspectives ranging from bacterial genetics through molecular biology, biochemistry, and microbiology and including such useful features as detailed structural models and up-to-date genetic maps.

The 39 chapters represent the ongoing work in nearly as many leading laboratories and include an introductory chapter by the editors which recounts the historical developments leading to the present state of our knowledge and which serves to integrate the diverse approaches of the contributors. The result is an eminently useful book that will be appreciated by both scientists and graduate students.

CONDENSED CONTENTS

Prologue (2 chapters by Drlica and Riley and Berg)

Primary Structure: Genetic and Physical Maps (9 chapters by Kohara, Daniels, Condemine and Smith, Brewer, Riley and Sanderson, Holloway et al., Piggot, Hopwood and Kieser, and Pattee)

Configuration of DNA (9 chapters by Kellenberger, Wells et al., Drlica et al., Smith et al., Yang and Ames, Thompson et al., Pettijohn and Hodges-Garcia, Rouviere-Yaniv et al., and Imamoto and Kano)

Chromosome Replication and Segregation (6 chapters by Zyskind, Leonard et al., Ogasawara et al., Kuempel et al., Wake, and Schaechter)

Recombination and Major Genetic Change (6 chapters by Ornston et al., Hill et al., Mahan et al., Francois et al., Anagnostopoulos, and Bouche et al.)

Global Responses to Stress (4 chapters by Thliveris et al., Smith et al., Georgopoulos et al., and Higgins et al.)

Cryptic Genetic Information (2 chapters by Lopilato and Wright and Thaler et al.)

Epilogue (Campbell)

Hardcover (ISBN 1-55581-018-7)

Estimated publication date: February 1990

Approximately 490 pages, illustrated, color plates, index

Prepublication prices: Member, \$63.00; Nonmember, \$87.00

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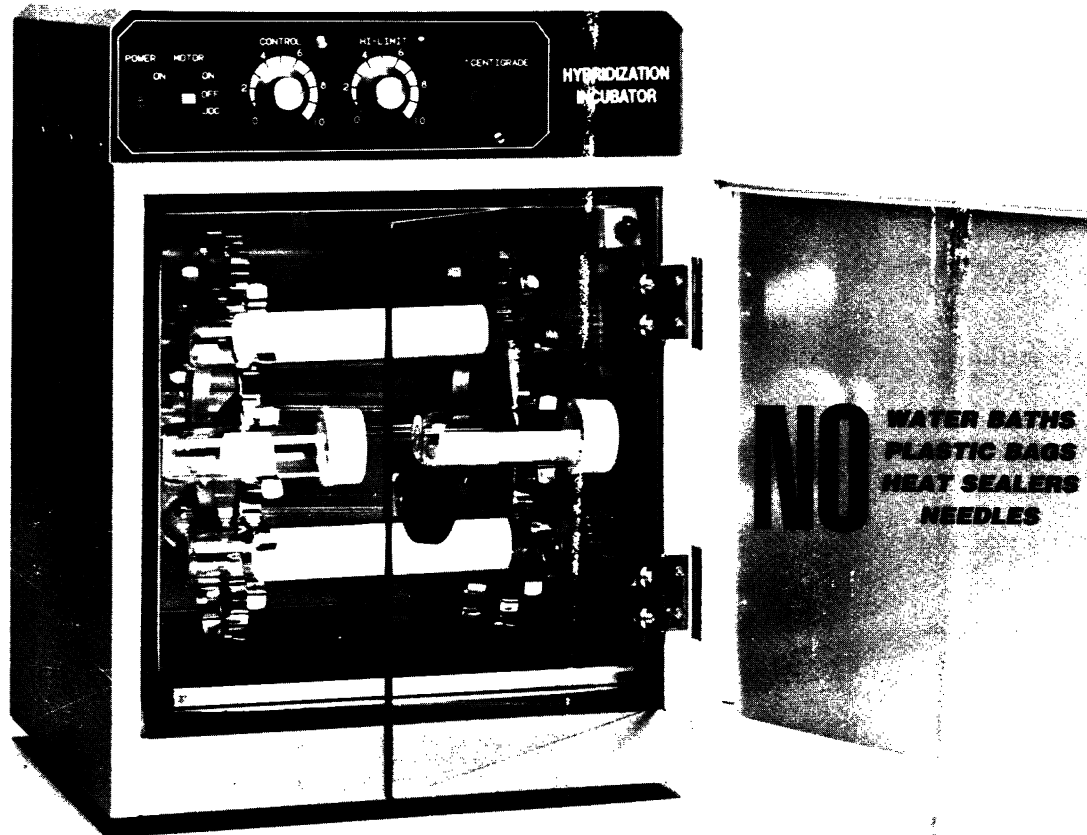
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