



# IMMUNOBIOLOGY AND PATHOGENESIS OF PERSISTENT VIRUS INFECTIONS



Edited by **Carlos Lopez, Ph.D.**  
*Lilly Research Laboratories, Indianapolis, Indiana*

Chronic or persistent viral infections are among the leading causes of human suffering and mortality, and the viruses producing these conditions are the subjects of intensive and increasing study. This volume summarizes basic concepts essential for understanding the immunobiology and pathogenesis of persistent virus infections and then presents reviews of recent advances in this field, focusing on infections caused by the human immunodeficiency virus, Epstein-Barr virus, and arenaviruses. Strategies for continued research are also emphasized.

All of the contributors are distinguished scientists now working in basic and applied virology, immunology, and epidemiology. *Immunobiology and Pathogenesis of Persistent Virus Infections* will be especially valuable to scientists and students seeking an overview of this topic and insight into the pathogenetic mechanisms of less-well-understood viruses such as the human immunodeficiency virus. Researchers already concentrating on specific types of viral infections who wish to know more about other persistent viruses will also find this book useful, as will public health professionals dealing with chronic diseases.

Based on the First International Symposium on Immunobiology and Pathogenesis of Persistent Virus Infections, Atlanta, Ga., in April, 1987. To order, complete and return the form below.

## CONDENSED CONTENTS

- I. Basic Concepts** (5 chapters by Mims, Allison, Lopez, Zinkernagel, and Gordis)
- II. Arenavirus Infections** (7 chapters by Bishop, Buchmeier et al., Lehmann-Grube, Welsh et al., Rosenthal, Whitton et al., and Ahmed)
- III. Human Immunodeficiency Virus Infections** (7 chapters by Wong-Staal, Holmberg and Curran, Quinn, Wigzell et al., McDougal, Nicholson, and Hirsch)
- IV. Epstein-Barr Virus Infections** (3 chapters by Straus, Rickinson, and Tosata and Pike)

Hardcover (ISBN 1-55581-000-4)  
Publication date: June, 1988.  
Approximately 330 pages, illustrated, index.

Here is my order for IMMUNOBIOLOGY AND PATHOGENESIS OF PERSISTENT VIRUS INFECTIONS.

Check price	Quantity	Total Cost
<input type="checkbox"/> \$35.00 (Member)	× _____	= \$ _____
<input type="checkbox"/> \$55.00 (Nonmember)	× _____	= \$ _____

If ordering at the member price, give member number: \_\_\_\_\_

Check payment method:

Payment enclosed      Card number \_\_\_\_\_  
 MasterCard              Expiration date \_\_\_\_\_  
 VISA                          Signature \_\_\_\_\_  
 American Express

Ship to:

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

Zip/Postal code \_\_\_\_\_ Country \_\_\_\_\_

Send completed form to:



**Publication Sales**  
**American Society for Microbiology**  
**1913 I Street, N.W.**  
**Washington, DC 20006**

MCB 888

# Enter A Personal Subscription To **NATURE** – The International Weekly Journal of Science... And Save Up To 61% Off The Cover Price!

Since 1869, week after week, *NATURE* has provided a forum where ground-breaking studies are announced. From Darwin and Huxley... to Brown and Goldstein, *NATURE* has maintained the standards that have established it worldwide as the foremost science publication.

Now, *NATURE* is announcing another breakthrough – a substantial savings on all personal subscriptions.

For as little as \$1.91 a week, *NATURE* conveniently provides you with the latest scientific developments that affect and change the very course of modern science – all within the pages of *one* magazine.

A personal subscription to *NATURE* also delivers much more than research articles. In each issue, *NATURE* gives you:

**NATURE'S News and Views Section:** brief, and often controversial, reviews of the most hotly debated areas of scientific research.

**NATURE'S Book Review Section:** texts you should be looking at, and the Product News Section tells you what supplies you should be thinking about buying... from lasers, to laboratory software, to peptides.

**NATURE'S Classifieds:** looking for a new position, then you'll look at the most complete international scientific job listing published.

And that's not all... When you subscribe to *NATURE* you also get the valuable author and subject issues for easy library reference.

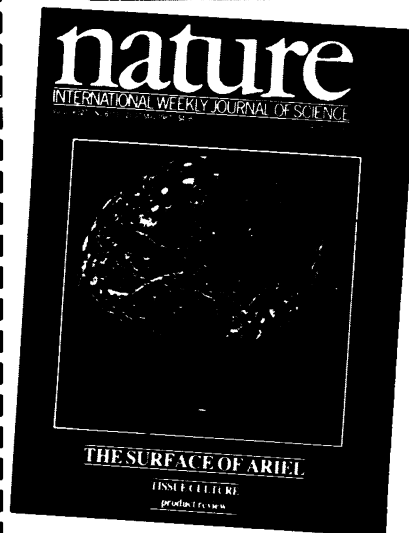
**Why not subscribe today?**  
To start your subscription, simply clip the coupon and mail it along with your payment.

With an issue in your mailbox, week after week, you can rest assured that you'll be on top of the newest discoveries in the international scientific community.



7AKJ

Mail to: *NATURE* Subscription Dept.  
P.O. Box 7663  
Teaneck, New Jersey 07666-9857



**YES!** I want to receive *NATURE* every week at the special low rate checked below – saving me as much as 61% OFF the cover price.

Two years (102 issues) only \$1.91 per copy (\$195 total price). *That's 61% OFF the cover price!*

One year (51 issues) only \$2.45 per copy (\$125 total price). *That's 50% OFF the cover price!*

40 issues... \$98.

My personal check is enclosed.

Charge my credit card.

VISA

MasterCard

AMEX

Card No: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

MCB 5 85

#### IMPORTANT:

This special rate is available to individual subscribers in the U.S. and Canada only. Payment by personal check or credit card must accompany an individual-subscriber order. For institutional or corporate subscriptions, please remit full subscription price of \$250 for one year or \$500 for two years. BASIC ANNUAL INDIVIDUAL RATE \$125; INSTITUTIONAL/CORPORATE \$250.

**SAVE UP TO  
61% OFF**

# Aspects of Microbiology

Series editors: J. A. Cole, University of Birmingham; C. J. Knowles, University of Kent; and D. Schlessinger, Washington University School of Medicine

Announcing a new addition to the acclaimed paperback series

The latest addition to the *Aspects of Microbiology* series offers a clear, concise account of plant pathogenic bacteria. The plants, as hosts, and the bacteria, as pathogens, are first considered separately, followed by a detailed discussion of their interaction at the molecular, cellular, and genetic levels. The final chapters cover the subjects of plant responses to bacterial invasion and epidemiology and control, noting the special difficulties encountered in the control of bacterial diseases in plants compared with those in mammals and with fungal diseases in plants. Like earlier titles in the series, the new book bridges the gap between textbooks and original research by combining background reviews with summaries of recent findings, all presented in a concise, highly readable style. The series provides ideal supplementary reading for students and excellent updates for microbiologists.

## New title

**BACTERIA AS PLANT PATHOGENS**  
E. Billing. 1987. 79 pages.

## Of continuing interest

**ENVIRONMENTAL VIROLOGY**  
V. C. Rao and J. L. Melnick.  
1986. 88 pages.

**BACTERIAL PLASMIDS, 2nd ed.**  
K. Hardy. 1986. 114 pages.

**BACTERIAL TOXINS, 2nd ed.**  
J. Stephen and R. A. Pietrowski.  
November 1986. 160 pages.

**MICROBIAL EXTRACHROMOSOMAL GENETICS**  
S. G. Oliver and T. A. Brown.  
1985. 85 pages.

**BIOTECHNOLOGY PRINCIPLES**  
J. E. Smith. 1985. 119 pages.

**INTESTINAL MICROBIOLOGY**  
B. S. Drasar and P. A. Barrow.  
1985. 80 pages.

**EXTRACELLULAR ENZYMES**  
F. G. Priest. 1984. 79 pages.

**ORAL MICROBIOLOGY, 2nd ed.**  
P. D. Marsh and M. V. Martin.  
1984. 120 pages.

**METHYLOTROPHY AND METHANOGENESIS**  
P. J. Large. 1983. 88 pages.

**MICROBIAL CONTROL OF PLANT PESTS AND DISEASES**  
J. W. Deacon. 1983. 88 pages.

**BACTERIAL CELL STRUCTURE**  
H. J. Rogers. 1983. 90 pages.

**BACTERIAL RESPIRATION AND PHOTOSYNTHESIS**  
C. W. Jones. 1982. 106 pages.

**THE MICROBIAL CELL CYCLE**  
C. Edwards. 1981. 88 pages.

Please send me the following title(s) in the *Aspects* series:

Quantity	Title	All books: nonmember, \$14.00 member, \$10.00
_____	BACTERIA AS PLANT PATHOGENS (ISBN 0-914826-95-6)	
_____	ENVIRONMENTAL VIROLOGY (ISBN 0-914826-86-7)	
_____	BACTERIAL PLASMIDS, 2nd ed. (ISBN 0-914826-87-5)	
_____	BACTERIAL TOXINS, 2nd ed. (ISBN 0-914826-88-3)	
_____	MICROBIAL EXTRACHROMOSOMAL GENETICS (ISBN 0-914826-79-4)	
_____	BIOTECHNOLOGY PRINCIPLES (ISBN 0-914826-68-9)	
_____	INTESTINAL MICROBIOLOGY (ISBN 0-914826-71-9)	
_____	EXTRACELLULAR ENZYMES (ISBN 0-914826-64-6)	
_____	ORAL MICROBIOLOGY, 2nd ed. (ISBN 0-914826-63-8)	
_____	METHYLOTROPHY AND METHANOGENESIS (ISBN 0-914826-52-2)	
_____	MICROBIAL CONTROL OF PLANT PESTS AND DISEASES (ISBN 0-914826-50-6)	
_____	BACTERIAL CELL STRUCTURE (ISBN 0-914826-51-4)	
_____	BACTERIAL RESPIRATION AND PHOTOSYNTHESIS (ISBN 0-914826-55-7)	
_____	THE MICROBIAL CELL CYCLE (ISBN 0-914826-54-9)	

If ordering at member prices, write member number here \_\_\_\_\_

Payment of \$\_\_\_\_\_ enclosed.

My order is over \$15.00. Please charge to my  MasterCard  VISA

Card number \_\_\_\_\_ Expires \_\_\_\_\_

Signature \_\_\_\_\_

Allow four to six weeks for delivery.

## ORDERING INFORMATION

All member orders must be prepaid or charged to MasterCard or VISA to qualify for the member rate. The minimum charge is \$15.00. Member orders from outside the United States must be accompanied by payment in U.S. dollars, drawn on a U.S. bank located within the continental United States, or charged to MasterCard or VISA. Members are limited to three copies of available titles at the member price.

ASM members and U.S. nonmembers should direct their orders for *Aspects for Microbiology* titles to: **American Society for Microbiology, Finance Department, 1913 I Street, N.W., Washington, DC 20006.** Outside the United States, nonmembers should direct their orders and inquiries to: **Van Nostrand Reinhold, Molly Millars Lane, Wokingham, Berkshire, RG11 2PY, England.**

Ship to:

Name \_\_\_\_\_

Institution \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

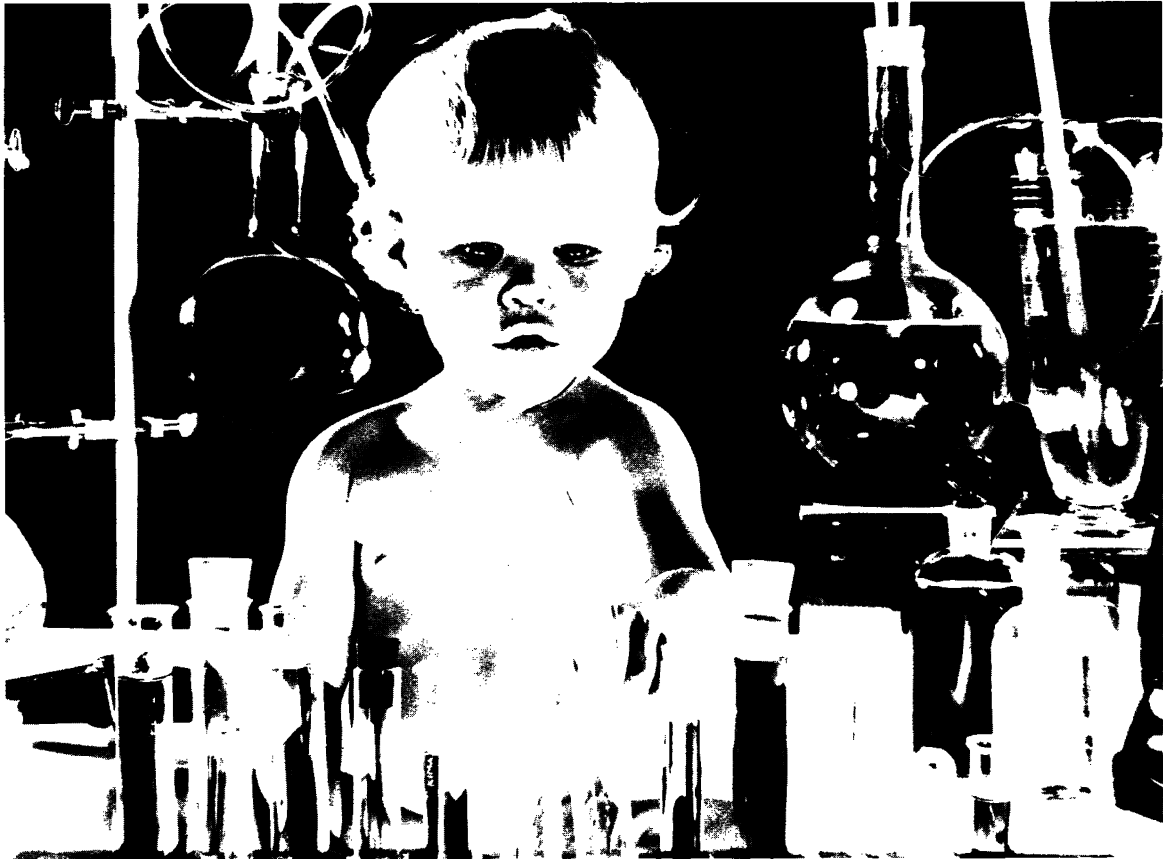
State/Province \_\_\_\_\_ Zip/Postal code \_\_\_\_\_

Country \_\_\_\_\_



American Society for Microbiology

MCB 8/88



c. 1988 Frank J. Arellio

## Follow Great Discoveries From Their Infancy

**BIOPHYSICAL JOURNAL** Theoretical and experimental developments in biophysical research. Journal of the Biophysical Society, edited in cooperation with the Division of Biological Physics of the American Physical Society. Monthly. \$400 (Europe \$423). T. E. Thompson, editor.

**THE JOURNAL OF CELL BIOLOGY** Contemporary cell biology from the international community. Edited in cooperation with the American Society for Cell Biology. Monthly. \$300 (Europe \$352). N. B. Gilula, editor.

**THE JOURNAL OF CLINICAL INVESTIGATION** Research linking basic science to clinical practice, including summaries of emerging avenues of investigation. Journal of the American Society for Clinical Investigation. Monthly. \$200; Personal \$130\* (Europe add \$44). B. F. Scharschmidt, editor.

**THE JOURNAL OF EXPERIMENTAL MEDICINE** Significant research in immunology and experimental medicine. Monthly. \$150 (Europe \$190). A. Cerami, Z. Cohn, M. McCarty, editors.

**THE JOURNAL OF GENERAL PHYSIOLOGY** Concerned with mechanisms of broad physiological significance, covering prime research for cellular and molecular physiology. Official journal of the Society of General Physiology. Monthly. \$125 (Europe \$148). P. F. Cranefield, editor.

The Rockefeller  
University Press

Yes, please send me a x81  
 subscription to \_\_\_\_\_  
 sample issue of \_\_\_\_\_  
 student discount form  RU Press catalog  
 Enclosed is my payment of \$ \_\_\_\_\_  
 Charge my Visa or Mastercard (circle one)

Card number Signature Expiration date

All orders must be prepaid. Checks and money orders must be drawn on U.S. banks and payable to The Rockefeller University Press. \*The JCI personal rate requires payment by personal check. Prices cited are for 1988 volumes. Send orders to The Rockefeller University Press, Order Service, Box 5108, Church Street Station, New York, NY 10249. MCB 8/88

Linking two rapidly advancing fields....

# DNA Replication and Mutagenesis

Edited by

**Robb E. Moses**, *Department of Cell Biology, Baylor College of  
Medicine, Houston, Texas, and*

**William C. Summers**, *Department of Therapeutic Radiology, Yale  
University School of Medicine, New Haven, Connecticut*

*DNA Replication and Mutagenesis* contains current approaches for studying the role of DNA replication in mutagenesis. Biochemical and genetic analyses are described for both procaryotes and eucaryotes. Most mutagenesis appears to be the result of functions occurring during DNA replication. The purpose of this book is to review recent investigations of these functions and the contribution of each of them to mutagenesis of the genome.

This book will interest researchers in molecular biology and genetics, biochemistry, nucleic acid enzymology, and toxicology and pharmacology, as well as graduate students in the biological sciences or in advanced medical school programs. Based on an ASM conference held in November 1987, on Marco Island, Florida.

Below are the condensed contents of this book. To order, complete the form at the bottom of the page and return it to ASM.

## Condensed Contents

**PART I. Enzymology of DNA Replication** (7 chapters by Kornberg et al., McHenry et al., Lee et al., Reha-Krantz, Hickey et al., Abbotts et al., and Lee)

**PART II. DNA Replication Systems** (12 chapters by Nakai et al., Campbell et al., Abeles and Austin, Masai and Arai, Blanco et al., Lindberg et al., Laffan and Firshein, Kline et al., Meyer et al., Liu and Norwood, Hacker et al., and Roberts and Kunkel)

**PART III. Mechanisms of Misincorporation** (8 chapters by Preston et al., Beardsley et al., Joyce et al., Ripley and Papanicolaou, Shiber and Sinha, Maurer et al., Kaufman, and Fuchs et al.)

**PART IV. Bypass Synthesis** (8 chapters by Bridges et al., Goodman et al., Livneh et al., Bryan et al., Sahn et al., Schaaper and Dunn, Maenhaut-Michel, and Bessho et al.)

**PART V. Genetic Control of Mutagenesis** (5 chapters by Nohmi et al., Eckardt-Schupp, Kushner and Phillips, Hayes, and Balbinder)

**PART VI. Damage-Directed Mutagenesis** (9 chapters by LeClerc et al., Eisenstadt, Moriya et al., Drinkwater et al., Lee and Cerami, Berry, Lirette and Caradonna, Williams and Pollack, and Rebeck et al.)

**PART VII. Induced Mutagenesis** (4 chapters by Herrlich, Maher et al., Dixon et al., and Greggio et al.)

Please send me **DNA Replication and Mutagenesis**.

Publication date: August 1988.

Approximately 520 pages, illustrated, index.

Hardcover (ISBN 1-55581-003-9).

Check Price	Quantity	Total Cost
<input type="checkbox"/> Member price: \$39.00	_____	\$ _____
<input type="checkbox"/> Nonmember price: \$59.00	_____	\$ _____

Allow 4-6 weeks after publication for delivery. Prices are subject to change without notice. Limit of 3 copies at the member price. If ordering at the member price, give membership number: \_\_\_\_\_

Check one

- Payment enclosed      Card number \_\_\_\_\_  
 MasterCard              Expiration date \_\_\_\_\_  
 VISA                          Signature \_\_\_\_\_  
 American Express

Please print or type mailing information

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State/Province \_\_\_\_\_  
Zip/Postal code \_\_\_\_\_ Country \_\_\_\_\_



Send to

Publication Sales, American Society for Microbiology  
1913 I Street, N.W., Washington, DC 20006

MCB 8/88