

# MOLECULAR AND CELLULAR BIOLOGY

VOLUME 15 • JANUARY 1995 • NUMBER 1

**Alan M. Weiner**, *Editor in Chief* (1995)  
*Yale University*

**James C. Alwine**, *Editor* (1998)  
*University of Pennsylvania School of Medicine*

**James R. Broach**, *Editor* (1995)  
*Princeton University*

**Nouria Hernandez**, *Editor* (1998)  
*Cold Spring Harbor Laboratory*

**Anita K. Hopper**, *Editor* (1999)  
*The Milton S. Hershey Medical Center  
Pennsylvania State University*

**Tom Kadesch**, *Editor* (1996)  
*University of Pennsylvania School  
of Medicine*

**Robert E. Kingston**, *Editor* (1997)  
*Massachusetts General Hospital*

**Adrian R. Krainer**, *Editor* (1998)  
*Cold Spring Harbor Laboratory*

**Douglas Lowy**, *Editor* (1998)  
*National Institutes of Health*

**Charles J. Sherr**, *Editor* (1995)  
*St. Jude Children's Research Hospital*

**Nahum Sonenberg**, *Editor* (1998)  
*McGill University*

**George F. Sprague, Jr.**, *Editor* (1998)  
*University of Oregon*

**Jonathan R. Warner**, *Editor* (1998)  
*Albert Einstein College of Medicine*

**Michael J. Weber**, *Editor* (1997)  
*University of Virginia Medical  
School*

**Elton T. Young**, *Editor* (1998)  
*University of Washington*

**Kenneth S. Zaret**, *Editor* (1998)  
*Brown University*

## EDITORIAL BOARD

Frederick W. Alt (1996)  
Albert Baldwin (1996)  
Claudio Basilio (1997)  
Susan Berget (1996)  
Elizabeth H. Blackburn (1997)  
Jef D. Boeke (1997)  
Joseph Bolen (1996)  
Allan Bradley (1996)  
Marjorie C. Brandriss (1997)  
Rodrigo Bravo (1995)  
John B. E. Burch (1997)  
Judith Campbell (1995)  
John A. Carbon (1996)  
Michael Carey (1997)  
Marian Carlson (1995)  
Nam-Hai Chua (1997)  
Charles Cole (1996)  
Jonathan A. Cooper (1995)  
Sara Courtneidge (1997)  
Gerald R. Crabtree (1996)  
Elizabeth A. Craig (1997)  
Frederick R. Cross (1997)  
Thomas Curran (1997)  
Melvin L. DePamphilis  
(1995)  
Thomas Donahue (1995)  
Daniel J. Donoghue (1996)  
Robert N. Eisenman (1997)  
Sarah C. R. Elgin (1997)  
Scott Emr (1997)  
Douglas Engel (1995)

Beverly Errede (1996)  
Stanley Fields (1997)  
Thomas D. Fox (1996)  
Leonard P. Freedman (1997)  
Bruce Futcher (1995)  
William T. Garrard (1997)  
Jackson B. Gibbs (1997)  
Michael Gilman (1995)  
Stephen P. Goff (1995)  
Paula J. Grabowski (1997)  
Jack F. Greenblatt (1997)  
Rudolf Grosschedl (1995)  
Mark Groudine (1996)  
Joyce L. Hamlin (1996)  
Hidesaburo Hanafusa (1995)  
Nathaniel Heintz (1997)  
John W. B. Hershey (1997)  
Alan Hinnebusch (1997)  
Peter M. Howley (1997)  
Stephen H. Hughes (1995)  
James N. Ihle (1995)  
Alexander Johnson (1996)  
Mark Johnston (1997)  
Katherine A. Jones (1995)  
James T. Kadonaga (1995)  
Michael Karin (1997)  
Randall Kaufman (1997)  
Jack D. Keene (1996)  
Hannah Klein (1997)  
Daniel Klessig (1995)  
Monty Krieger (1995)

Janet Kurjan (1997)  
Elisabeth Lacy (1996)  
Alan Lambowitz (1996)  
Lester F. Lau (1995)  
Michael Lenardo (1997)  
Arthur D. Levinson (1996)  
David Levy (1995)  
John T. Lis (1995)  
James Manley (1995)  
Lynne E. Maquat (1997)  
Kunihiro Matsumoto (1997)  
Frank McCormick (1995)  
Aaron P. Mitchell (1997)  
N. Ronald Morris (1995)  
Paul Neiman (1995)  
Joseph R. Nevins (1996)  
Carol Newlon (1997)  
Eric N. Olson (1995)  
Harvey L. Ozer (1997)  
Mary Lou Pardue (1997)  
Roy Parker (1997)  
Marvin R. Paule (1996)  
Tony Pawson (1997)  
Magnus Pfahl (1997)  
Scott Powers (1997)  
John R. Pringle (1997)  
Randall R. Reed (1995)  
Robin Reed (1996)  
Steven I. Reed (1997)  
Danny Reinberg (1997)  
Jasper D. Rine (1997)

Nadia Rosenthal (1995)  
Suzanne Sandmeyer (1997)  
Joseph Schlessinger (1997)  
Matthew P. Scott (1995)  
Bart Sefton (1995)  
Harinder Singh (1995)  
Stephen Smale (1997)  
Frank Solomon (1997)  
Karen U. Sprague (1995)  
David Stern (1997)  
Nat L. Sternberg (1995)  
Tom H. Stevens (1995)  
Bruce Stillman (1997)  
Kevin Struhl (1995)  
Bill Sugden (1997)  
Kelly G. Tatchell (1995)  
Lawrence H. Thompson  
(1997)  
Lex H. T. van der Ploeg (1997)  
Geoffrey Wahl (1995)  
Randolph Wall (1995)  
Peter Walter (1996)  
Jean Y. J. Wang (1996)  
Lewis T. Williams (1997)  
Fred Winston (1997)  
Orjan Wrangé (1997)  
Richard Young (1995)  
Virginia A. Zakian (1995)  
Richard S. Zitomer (1997)

**Barbara H. Iglewski**, *Chairman, Publications Board*  
**Kenneth April**, *Production Editor*

**Linda M. Illig**, *Director, Journals*  
**Thomas R. May**, *Assistant Production Editor*

*Molecular and Cellular Biology*, a publication of the American Society for Microbiology (ASM), 1325 Massachusetts Ave., N.W., Washington, DC 20005-4171, is devoted to the advancement and dissemination of fundamental knowledge concerning the molecular biology of eukaryotic cells, of both microbial and higher organisms. Instructions to authors are published in the January issue each year; reprints are available from the editors and the Journals Department. The journal is published monthly, one volume per year. The nonmember print subscription prices are \$392 (U.S.) (Canadians add 7% GST) and \$502 (other countries) per year; single copies are \$43 (Canadians add 7% GST). The member print subscription prices are \$80 (U.S.) (Canadians add 7% GST) and \$110 (other countries); single copies are \$11 (Canadians add 7% GST). For prices of CD-ROM versions, contact the Subscriptions Unit, ASM. Correspondence relating to subscriptions, defective copies, missing issues, and availability of back issues should be directed to the Subscriptions Unit, ASM; correspondence relating to reprint orders should be directed to the Reprint Order Unit, ASM; and correspondence relating to disposition of submitted manuscripts, proofs, and general editorial matters should be directed to the Journals Department, American Society for Microbiology, 1325 Massachusetts Ave., N.W., Washington, DC 20005-4171. Phone: (202) 737-3600.

Claims for missing issues from residents of the United States, Canada, and Mexico must be submitted within 3 months after publication of the issues; residents of all other countries must submit claims within 6 months of publication of the issues. Claims for issues missing because of failure to report an address change or for issues "missing from files" will not be allowed.

Second-class postage paid at Washington, DC 20005, and at additional mailing offices.

POSTMASTER: Send address changes to *Molecular and Cellular Biology*, ASM, 1325 Massachusetts Ave., N.W., Washington, DC 20005-4171.

Made in the United States of America. Printed on acid-free paper.

Copyright © 1995, American Society for Microbiology. All Rights Reserved.

ISSN 0270-7306

CODEN: MCEBD4

The code at the top of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal use or for personal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per-copy fee through the Copyright Clearance Center Inc., 222 Rosewood Drive, Danvers, MA 01923, for copying beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale.