

# MOLECULAR AND CELLULAR BIOLOGY

VOLUME 25 • JULY 2005 • NUMBER 14

**James N. Ihle**, *Editor in Chief* (2010)  
*St. Jude Children's Research Hospital*

**Dafna Bar-Sagi**, *Editor* (2007)  
*State University of New York at Stony Brook*

**Shelley L. Berger**, *Editor* (2008)  
*The Wistar Institute*

**John L. Cleveland**, *Editor* (2009)  
*St. Jude Children's Research Hospital*

**Alan D. D'Andrea**, *Editor* (2008)  
*Dana-Farber Cancer Institute*

**Roger J. Davis**, *Editor* (2007)  
*University of Massachusetts Medical School*

**James Douglas Engel**, *Editor* (2007)  
*University of Michigan Medical School*

**Mark E. Ewen**, *Editor* (2009)  
*Dana-Farber Cancer Institute*

**Leonard P. Freedman**, *Editor* (2006)  
*Wyeth Research*

**James L. Manley**, *Editor* (2008)  
*Columbia University*

**Benjamin G. Neel**, *Editor* (2009)  
*Beth Israel Deaconess Medical Center*

**Joel D. Richter**, *Editor* (2008)  
*University of Massachusetts Medical School*

**Andrew S. Shaw**, *Editor* (2008)  
*Washington University School of Medicine*

**Harinder Singh**, *Editor* (2007)  
*University of Chicago*

**Patrick Sung**, *Editor* (2009)  
*Yale University School of Medicine*

**Jeremy W. Thorner**, *Editor* (2008)  
*University of California, Berkeley*

**Jerry L. Workman**, *Editor* (2007)  
*Stowers Institute for Medical Research*

## EDITORIAL BOARD

Cory Abate-Shen ('06)  
Frederick W. Alt ('05)  
Manuel Ares, Jr. ('05)  
Richard K. Assoian ('05)  
Claudio Basilio ('06)  
Peter B. Becker ('05)  
James J. Bieker ('07)  
Adrian P. Bird ('05)  
Douglas L. Black ('06)  
Elizabeth H. Blackburn ('06)  
Gerd A. Blobel ('06)  
Johannes Bos ('07)  
Allan Bradley ('05)  
Emery Bresnick ('07)  
Stephen Buratowski ('05)  
John B. E. Burch ('06)  
John A. Carbon ('05)  
Michael Carey ('05)  
Christopher Carpenter ('07)  
Anthony M. Carr ('07)  
Benoit Chabot ('05)  
Melanie H. Cobb ('05)  
Charles Cole ('05)  
Jonathan A. Cooper ('07)  
Albert J. Courey ('06)  
Frederick R. Cross ('06)

George A. M. Cross ('05)  
Thomas Curran ('06)  
Titia de Lange ('05)  
Sharon Y. R. Dent ('07)  
Melvin L. DePamphilis ('07)  
Channing J. Der ('06)  
Nicholas J. Dyson ('05)  
Robert N. Eisenman ('06)  
Wafik S. El-Deiry ('05)  
Sarah C. R. Elgin ('06)  
Scott Emr ('06)  
Beverly Errede ('05)  
Stanley Fields ('06)  
Steven N. Fiering ('06)  
Daniel Finley ('05)  
Steven M. Frisch ('05)  
Michael Garabedian ('07)  
Mariano Garcia-Blanco ('05)  
William T. Garrard ('06)  
Sankar Ghosh ('06)  
Kathleen L. Gould ('05)  
Paula J. Grabowski ('06)  
Mark Groudine ('05)  
Lorraine J. Gudas ('07)  
Deborah L. Gumucio ('06)  
James E. Haber ('07)

Joyce L. Hamlin ('05)  
Michael Hampsey ('07)  
J. Marie Harwick ('05)  
Nathaniel Heintz ('06)  
Alan Hinnebusch ('07)  
Peter M. Howley ('06)  
Judith Jaehning ('05)  
Maria Jasin ('05)  
William G. Kaelin, Jr. ('05)  
Roland Kanaar ('07)  
Michael Karin ('06)  
Michael B. Kastan ('06)  
Andrius Kazlauskas ('07)  
Jack D. Keene ('05)  
Tom K. Kerppola ('06)  
Richard D. Kolodner ('07)  
Alan Lambowitz ('06)  
Lester F. Lau ('07)  
Mitchell A. Lazar ('05)  
David Levy ('07)  
Michael R. Lieber ('07)  
Anning Lin ('07)  
David M. Livingston ('06)  
Guillermina Lozano ('05)  
David J. Mangelsdorf ('06)  
Lynne E. Maquat ('06)

Ben Margolis ('05)  
Martin McMahon ('07)  
Aaron P. Mitchell ('06)  
Cornelis Murre ('06)  
Carol Newlon ('06)  
Timothy Nilsen ('06)  
Eric N. Olson ('07)  
Moshe Oren ('05)  
Keiko Ozato ('05)  
Tony Pawson ('06)  
Stuart W. Peltz ('05)  
Norbert Perrimon ('05)  
Craig L. Peterson ('05)  
John H. Petrini ('05)  
Magnus Pfahl ('06)  
Mark R. Phillips ('07)  
Martin Privalsky ('07)  
Nicholas J. Proudfoot ('06)  
Pere Puigserver ('07)  
John C. Reed ('05)  
Steven I. Reed ('06)  
Danny Reinberg ('06)  
Donald Rio ('06)  
Zs'ev A. Ronai ('07)  
Martine F. Roussel ('07)  
Peter Sarnow ('07)

David Schatz ('05)  
Carl W. Schmid ('05)  
Bart Sefton ('07)  
Ranjana Sen ('05)  
Jeffrey Settleman ('05)  
Yang Shi ('05)  
Dorothy E. Shippen ('07)  
Ann-Bin Shyu ('05)  
David Stern ('06)  
Kevin Struhl ('07)  
Kelly G. Tatchell ('07)  
Lawrence H. Thompson ('06)  
Jenny Pan-Yun Ting ('05)  
Alex Tokar ('07)  
Alexr Veillette ('07)  
Weidong Wang ('07)  
Xiao-Fan Wang ('07)  
Michael White ('07)  
Fred Winston ('06)  
Curt Wittenberg ('07)  
Nancy Woychik ('05)  
Michael B. Yaffe ('07)  
Masayuki Yamamoto ('06)  
Meng-Chao Yao ('05)  
Richard S. Zitomer ('06)

**Samuel Kaplan**, *Chairman, Publications Board*  
**Rebecca L. Zwadyk**, *Production Editor*

**Linda M. Illig**, *Director, Journals*  
**Jeff Herring**, *Assistant Production Editor*

*Molecular and Cellular Biology* (ISSN 0270-7306), a publication of the American Society for Microbiology (ASM), 1752 N St., N.W., Washington, DC 20036-2904, 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 twice monthly, one volume per year. Nonmember print subscription prices (per year) are: \$850, U.S.; \$931, Canada (plus 7% GST, or 7% GST + 8% HST where applicable); \$1058, Europe; \$1129, Latin America; \$1140, rest of world. Member print subscription prices (per year) are: \$242, U.S.; \$320, Canada (plus 7% GST, or 7% GST + 8% HST where applicable); \$442, Europe; \$510, Latin America; \$520, rest of world. Single copies are: \$50, nonmember; \$30, member (Canadians add 7% GST, or 7% GST + 8% HST where applicable). For prices of electronic 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, 1752 N St., N.W., Washington, DC 20036-2904. 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.

Periodicals postage paid at Washington, DC 20036, and at additional mailing offices.

POSTMASTER: Send address changes to *Molecular and Cellular Biology*, ASM, 1752 N St., N.W., Washington, DC 20036-2904.

Made in the United States of America. Printed on acid-free paper. doi:10.1128/MCB.25.14.2005 CODEN: MCEBD4

Copyright © 2005 American Society for Microbiology. All Rights Reserved.

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.