## Journal of Cellular Biochemistry

## **EXECUTIVE EDITORS**

In the United States: C. Fred Fox ● Life Sciences Building, University of California, Los Angeles, CA 90024-1570 Gary S. Stein ● Department of Cell Biology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655

In Europe: Max M. Burger ● Friedrich-Miescher Institut, Postfach 2543, CH-4002 Basel, Switzerland

## **FIELD EDITORS**

Garth L. Nicolson ● Department of Tumor Biology (108), MD Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030 W. Jackson Pledger ● Department of Cell Biology, Vanderbilt University School of Medicine, Nashville, TN 37232 James Watson ● Department of Pathology, University of Auckland School of Medicine, Auckland, New Zealand

## **EDITORIAL BOARD**

Jorge E. Allende Universidad de Chile Santiago, Chile

Richard G.W. Anderson University of Texas Health Science Center Dallas, TX

J. Bar-Tana The Hebrew University Jerusalem, Israel

Mina J. Bissell Lawrence Berkeley Laboratory Berkeley, CA

Rodrigo Bravo Bristol-Myers Squibb Princeton, NJ

Judith Campisi Boston University Medical School Boston, MA

Kermit L. Carraway University of Miami School of Medicine Miami, FL

Moses V. Chao Corneli Medical School New York, NY

Richard A. Clark State University of New York at Stony Brook Health Science Center

Health Science C Stony Brook, NY David R. Clemmons University of North Carolina Chapel Hill, NC

Carl M. Cohen St Elizabeth's Hospital Boston, MA

Dennis D. Cunningham University of California Irvine, CA

Michael P. Czech University of Massachusetts Medical Center Worcester, MA

Benoit De Crombrugghe University of Texas M.D. Anderson Cancer Center Houston, TX

Pierre De Meyts
Hagendorn Research Laboratory
Gentoffe, Denmark

Edward A. Dennis University of California-San Diego

Edward M. De Robertis University of Californ Los Angeles, CA Rik Derynck University of California San Francisco, CA

William N. Drohan American Red Cross Rockville, MD

John H. Elder Research Foundation of Scripps Clinic La Jolla, CA

Charles H. Evans National Cancer Institute National Institutes of Health Bethesda, MD

Gerald D. Fasman Brandeis University Waltham, MA

Carl M. Feldherr University of Florida College of Medicine Gainesville, FL

John H. Fessler University of California

Richard Firtel
Center for Molecular Genetics
University of California-San Diego
La Jolla, CA

ian Gibbons Kewalo Laboratory Honolulu, HI

David W. Golde Memorial Sloan Kettering Cancer Center New York, NY

Eugene Goldwasser University of Chicago Chicago, IL

Curtis C. Harris National Cancer Institute
National Institutes of Health
Bethesda, MD

University of Arizona College of Medicine Tucson, AZ

Norman B. Hecht Tufts University

. .... university Medford, MA Brian Herman University of North Carolina Chapel Hill, NC

Richard A. Houghten Torrey Pines Institute for Molecular Studies San Diego, CA

R. Colin Hughes National Institute for Medical Research London, United Kingdom

Tony Hunter Salk Institute San Diego, CA

Maria Imschenetsky Universidad de Concepcion Concepcion, Chile

Gary R. Jacobson Boston University Boston, MA

Gary L Johnson National Jewish Medical Center Denver, CO

Michael Klagsbrun The Children's Hospital Harvard Medical School Boston, MA

Jane B. Lian University of Mas Worcester, MA achusetts Medical Center

Marc E. Lippman Lombardi Cancer Cente Georgetown University Washington, DC

Bruce E. Magun School of Medicine Oregon Health Science University Portland, OR

Harold L. Moses Vanderbilt University School of Medicine

Marit Nilsen-Hamilto lowa State University Ames, IA

Anthony W. Norman University of California Riverside, CA

Dale L. Oxender Warner-Lambert Company Ann Arbor, MI

Richard G. Painter University of Texas Health Center Tyler, TX

Roger Patient King's College London, United Kingdom

Sheldon Penman Massachusetts Institute of Technology Cambridge, MA

Paul F. Pilch Boston University School of Medicine Boston, MA

Archie W. Prestayko Liphomed Rosemont, IL Phillips W. Robbins
Massachusetts Institute of Technology Cambridge, MA

Gideon A. Rodar Merck Sharp & Dohme Research Labs West Point, PA

Russell Ross University of Washington, Seattle, WA

E. Helene Sage University of Washington Seattle, WA

Milton H. Saler University of California-San Diego La Jolla, CA

Alan R. Saltiei Parke-Davis Ann Arbor, MI

Eric M. Shooter Stanford University School of Medicine Stanford, CA

Justin Silver Hadassan Medical Organization Kiryat Hadassah Jerusalem, Israel

Robert H. Singer University of Massachusetts Medical School Worcester, MA

Gall E. Sonenshein Boston University Medical School Boston, MA

Thomas C. Spelsberg Mayo Clinic and Graduate School of Medicine Rochester, MN

Eric J. Stanbridge University of California-Irvine College of Medicine Irvine, CA

E. Richard Stanley Albert Einstein College of Medicine Bronx, NY

**Donald F. Steiner** University of Chicago Chicago, IL Charles D. Stiles Harvard Medical School

Boston MA Tatsuo Suda Showa University

Tokyo, Japan Marvin L. Tanzer University of Connecticut Health Center Farmington, CT

Steven L. Teitelbaum Jewish Hospital at Washington University Medical Center St. Louis, MO

Jean Paul Thiery Laboratoire de Physiopathologie du Développement CNRS - ENS Paris, France

George Todaro Fred Hutchinson Cancer Research Center Seattle, WA

Kiaus Von Der Mark MPG Gruppe Rheumatologie/Bindegewebsforschung Erlangen, Germany

D. Martin Watterson Vanderbilt University Nashville, TN

Sherman Weissman Yale University School of Medicine New Haven, CT

Karel W.A. Wirtz State University of Utrecht Utrecht, Netherlands

© 1992 Wiley-Liss, Inc. All rights reserved. No part of this publication may be reproduced in any form or by any means, except as permitted under section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the publisher, or authorization through the Copyright Clearance Center, 27 Congress Street, Salem, MA 01970, (508) 744-3350, fax (508) 745-9379. Requests to the publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc.

Journal of Cellular Biochemistry (ISSN 0730-2312) is published monthly by Wiley-Liss, Inc., a division of John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012. Send subscription

inquiries to: John Wiley & Sons, Inc., Subscription Department, 9th Floor, 605 Third Avenue, New York, NY 10158 (212) 850-8543.

Advertising Inquiries should be addressed to Roberta Frederick, Advertising Sales Manager, Wiley-Liss, Inc., 605 Third Avenue, New York, NY 10158-0012, (212) 850-8543.

Subscription Price: Volumes 48, 49, and 50 (12 issues), plus Supplement 16 (9 volumes), 1992: \$1,036 in US; \$1,231 outside US. Volumes 51, 52, and 53, (12 issues) plus Supplement 17 (7 parts), 1993: \$1,255 in US; \$1410 in Canada and Mexico; \$1455 outside North America. Special Personal Subscription Rate: 1992: \$95 in US; \$155 outside US. 1993: \$125 within North America; \$185 outside North America. (Individual price does not include Supplements.) All subscriptions outside the U.S. will be sent by air. Payment must be made in US dollars drawn on a US bank. Change of Address: Please forward to the subscriptions address listed above six weeks prior to move; enclose present mailing label with change of address. Claims for Missing Issues: Claims for undelivered copies will be accepted only after the following issue has been received. Please enclose a copy of the mailing label or cite your subscriber reference number in order to expedite handling. Missing copies will be supplied when losses have been sustained in transit and where reserve stock permits. Send claims to John Wiley & Sons, Inc., Customer Service, 605 Third Avenue, New York, NY 10158. If claims are not resolved satisfactorily, please write to Susan Malawski, Director, Subscriptions Fulfillment and Distribution, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158. Cancellations: Subscription cancellations will not be accepted after the first issue has been malled. Postmaster: Send address changes to Journal of Cellular Blochemistry, Susan Heaney, Subscription Fulfillment and Distribution, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158.

Indexed by: Current Contents/Life Sciences • Science Citation Index • Scisearch • Chemical Abstracts • Index Medicus • BIOSIS Data Base • Excerpta Medica • Information Retrieval, Ltd. • Cambridge Scientific Abstracts • Institute for Scientific Information-Soviet Union • Current Opinion in Orthopedics • Current Opinion in Pediatrics • Current Opinion in Cell Biology • Current Opinion in Orthopedics • Current Opinion in Orthope Rheumatology • Reference Update.

Printed in the United States of America. Copyright @ 1992 Wiley-Liss, Inc.