Journal of Cellular Biochemistry

EXECUTIVE EDITORS

In the United States: C. Fred Fox

Molecular Biology Institute, 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 Cornell Medical School New York, NY

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

Edward A. Dennis University of California-San Diego La Jolla, CA

Edward M. De Robertis University of California 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. Feldhern University of Florida College of Medicine Gainesville, FL

John H. Fessler University of California Los Angeles, CA

ian Gibbons Kewalo Laboratory Honolulu, Hi

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

Ira D. Goldfine Mt. Zion Hospital and Medical Center San Francisco, CA

Eugene Goldwasser University of Chicago Chicago, IL

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

Mark R. Haussler University of Arizona College of Medicine Tucson, AZ

Norman B. Hecht Tufts University Medford, MA

Brian Herman University of North Carolina Chapel Hill, NC

Harvey Herschman University of California Los Angeles, CA

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 Massachusetts Medical Center Worcester, MA

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

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

Harold L. Moses Vanderbilt University School of Medicine Nashville, TN

Anthony W. Norman University of California Riverside, CA Dale L. Oxender Warner-Lambert Company

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

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. Saitiel Parke-Davis Ann Arbor, MI

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

Justin Silver Hadassan Medical Organization Kiryat Hadassah

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

Gail E. Sonenshein Boston University Medical School Boston, MA

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

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

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

Donald F. Steiner

Charles D. Stiles Harvard Medical School Boston, MA

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

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

Jean Paul Thiery Laboratoire de Physiopathologie du Développement

George Todaro Fred Hutchinson Cancer Research Center

Milan R. Uskokovi c Hoffman-La Roche Inc Nutley, NJ

Klaus 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) 850-6543.

Advertising Inquirles should be addressed to Roberta Frederick, Advertising Sales Manager, Wiley-Liss, Inc., 605 Third Avenue, New York, NY 10158-0012, (212) 850-8832.

Subscription Price: Volumes 48, 49, and 50 (12 issues), plus Supplement 16 (9 volumes), 1992: \$1,036 in US; \$1,231 outside US. Special Personal Subscription Rate: \$95 in US; \$155 outside US. (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 mailed. Postmaster: Send address changes to Journal of Cellular Blochemistry, Susan Dorato, 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 Op Rheumatology • Reference Update.

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