

# MOLECULAR PHARMACOLOGY

EDITOR: JOEL G. HARDMAN, *Vanderbilt University*

ASSOCIATE EDITORS: LEE E. LIMBIRD, *Vanderbilt University*

F. PETER GUENGERICH, *Vanderbilt University*

EDITORIAL ASSISTANT: CORNELIA W. SHAW, *Vanderbilt University*

## EDITORIAL AND ADVISORY BOARD

EARL BARIL, *Worcester Foundation for Experimental Biology*

R. B. BARLOW, *University of Bristol*

L. L. BENNETT, JR., *Southern Research Institute*

N. J. M. BIRDSALL, *National Institute for Medical Research, Mill Hill*

JOËL BOCKAERT, *Centre CNRS-INSERM de Pharmacologie et Endocrinologie, Montpellier, France*

HENRY R. BOURNE, *University of California, San Francisco*

BRUCE McL. BRECKENRIDGE, *UMDNJ-Rutgers Medical School*

THEODORE M. BRODY, *Michigan State University*

CHARLES O. BROSTROM, *UMDNJ-Rutgers Medical School*

JOAN HELLER BROWN, *University of California, San Diego*

A. S. V. BURGEN, *University of Cambridge*

MARC G. CARON, *Duke University*

WILLIAM A. CATTERALL, *University of Washington*

COLIN F. CHIGNELL, *National Institute of Environmental Health Sciences*

P. MICHAEL CONN, *University of Iowa*

BRIAN M. COX, *Uniformed Services University of the Health Sciences*

JOHN W. DALY, *National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases*

MOHYEE E. ELDEFRAWI, *University of Maryland*

ROBERT F. FURCHGOTT, *State University of New York, Downstate Medical Center*

ALFRED G. GILMAN, *University of Texas Health Sciences Center, Dallas*

ROBERT I. GLAZER, *National Cancer Institute*

DAVID V. GODIN, *University of British Columbia*

AVRAM GOLDSTEIN, *Addiction Research Foundation, Palo Alto*

DORA B. GOLDSTEIN, *Stanford University*

H. JOSEPH GOREN, *University of Calgary*

T. KENDALL HARDEN, *University of North Carolina*

LUBOMIR S. HNILICA, *Vanderbilt University*

PAUL A. INSEL, *University of California, San Diego*

DONALD M. JERINA, *National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases*

ERIC F. JOHNSON, *Scripps Clinic and Research Foundation*

LAURENCE S. KAMINSKY, *State of New York Department of Health*

JOYCE J. KAUFMAN, *Johns Hopkins University*

LEMONT B. KIER, *Medical College of Virginia*

ROBERT J. LEFKOWITZ, *Duke University*

WAYNE LEVIN, *Hoffmann-La Roche Inc.*

ANTHONY Y. H. LU, *Merck Sharp & Dohme Research Laboratories*

MICHAEL E. MAGUIRE, *Case Western Reserve University*

GILBERT J. MANNERING, *University of Minnesota*

RONALD N. McELHANEY, *University of Alberta*

KEITH W. MILLER, *Harvard University*

KENNETH P. MINNEMAN, *Emory University*

PERRY B. MOLINOFF, *University of Pennsylvania*

PAUL R. ORTIZ DE MONTELLANO, *University of California, San Francisco*

JOHN P. PERKINS, *University of North Carolina*

RICHARD M. PHILPOT, *National Institute of Environmental Health Sciences*

JAMES W. PUTNEY, JR., *Medical College of Virginia*

H. P. RANG, *University College, London*

PETER W. REED, *Vanderbilt University*

JOHN B. SCHENKMAN, *University of Connecticut*

ARNOLD SCHWARTZ, *University of Cincinnati*

DAVID N. SILVERMAN, *University of Florida*

ERIC J. SIMON, *New York University*

IAN C. P. SMITH, *National Research Council of Canada, Ottawa*

PALMER TAYLOR, *University of California, San Diego*

SNORRI S. THORGEIRSSON, *National Cancer Institute*

JAMES R. TRUDELL, *Stanford University*

VOLKER ULLRICH, *University of Konstanz*

DAVID C. U'PRICHARD, *Nova Pharmaceutical Corporation*

WYLIE W. VALE, *Salk Institute, San Diego*

ELLIOT S. VESELL, *Pennsylvania State University*

FRANK F. VINCENZI, *University of Washington*

O. H. VIVEROS, *Wellcome Research Laboratories*

MICHAEL J. WARING, *University of Cambridge*

HAREL WEINSTEIN, *Mount Sinai School of Medicine*

J. N. WELLS, *Vanderbilt University*

BARRY B. WOLFE, *University of Pennsylvania*

## BOARD OF PUBLICATIONS TRUSTEES

WILLIAM W. FLEMING, *Chairman*

KAY A. CROKER, *Executive Officer*

JAMES A. BAIN

JOSEPH R. BIANCHINE

JOEL G. HARDMAN

EVA KING KILLAM

BETTIE SUE MASTERS

JERRY R. MITCHELL

MARCUS M. REIDENBERG

IRVING I. A. TABACHNICK

PALMER TAYLOR

VINCENT G. ZANNONI