

# MOLECULAR PHARMACOLOGY

EDITOR: WILLIAM A. CATTERALL, *University of Washington*

ASSOCIATE EDITORS: JOSEPH A. BEAVO, *University of Washington*  
MONT R. JUCHAU, *University of Washington*  
NEIL M. NATHANSON, *University of Washington*  
DANIEL R. STORM, *University of Washington*  
FRANK F. VINCENZI, *University of Washington*  
EDITORIAL ASSISTANT: JOAN M. BURTON, *University of Washington*

## EDITORIAL AND ADVISORY BOARD

- 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-Robert Wood Johnson Medical School*  
THEODORE M. BRODY, *Michigan State University*  
CHARLES O. BROSTROM, *UMDNJ-Robert Wood Johnson Medical School*  
JOAN HELLER BROWN, *University of California, San Diego*  
MARC G. CARON, *Duke University*  
COLIN F. CHIGNELL, *National Institute of Environmental Health Sciences*  
BRIAN M. COX, *Uniformed Services University of the Health Sciences*  
STANLEY T. CROOKE, *Smith, Kline & French Laboratories*  
JOHN W. DALY, *National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases*  
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*  
PHILIP GUZELIAN, *Medical College of Virginia*  
ROBERT P. HANZLIK, *University of Kansas*  
T. KENDALL HARDEN, *University of North Carolina*  
PAUL A. INSEL, *University of California, San Diego*  
ERIC F. JOHNSON, *Scripps Clinic and Research Foundation*  
GARY JOHNSON, *University of Massachusetts Medical Center*  
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*  
KEITH W. MILLER, *Harvard University*  
RICHARD J. MILLER, *University of Chicago*  
KENNETH P. MINNEMAN, *Emory University*  
PERRY B. MOLINOFF, *University of Pennsylvania*  
PAUL R. ORTIZ DE MONTELLANO, *University of California, San Francisco*  
RICHARD M. PHILPOT, *National Institute of Environmental Health Sciences*  
ALAN POLAND, *University of Wisconsin*  
JAMES W. PUTNEY, JR., *National Institute of Environmental Health Sciences*  
H. P. RANG, *University College, London*  
PETER W. REED, *Vanderbilt University*  
JOHN B. SCHENKMAN, *University of Connecticut*  
ARNOLD SCHWARTZ, *University of Cincinnati*  
IAN C. P. SMITH, *National Research Council of Canada, Ottawa*  
PALMER TAYLOR, *University of California, San Diego*  
JAMES R. TRUDELL, *Stanford University*  
VOLKER ULLRICH, *University of Konstanz*  
WYLIE W. VALE, *Salk Institute, San Diego*  
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*  
SUZANNE ZUKIN, *Albert Einstein College of Medicine*

## BOARD OF PUBLICATIONS TRUSTEES

WILLIAM W. FLEMING, Chairman  
KAY A. CROKER, Executive Officer

JAMES A. BAIN  
JOSEPH R. BIANCHINE  
WILLIAM A. CATTERALL  
EVA KING KILLAM  
BETTIE SUE MASTERS

JERRY R. MITCHELL  
MARCUS M. REIDENBERG  
IRVING I. A. TABACHNICK  
PALMER TAYLOR  
VINCENT G. ZANNONI