

## THE JOURNAL OF

**Pharmacology**

## AND EXPERIMENTAL THERAPEUTICS

FOUNDED BY JOHN J. ABEL 1909

*Official Publication of The American Society for  
Pharmacology and Experimental Therapeutics, Inc.*

## EDITOR

Eva King Killam

## ASSISTANT EDITOR

Mannfred A. Hollinger

## EDITORS FOR SPECIFIC FIELDS

*Analgesia and Drug Abuse*

Joseph Cochlin

*Autonomic Pharmacology*

Robert E. Stitzel

*Behavioral Pharmacology*

Roger T. Kelleher

*Cardiovascular Pharmacology*

Henry R. Besch, Jr.

Michael J. Brody

Benedict R. Lucchesi

*Cell Pharmacology*

Toshio Narahashi

George B. Weiss

*Chemotherapy*

H. George Mandel

*Developmental Pharmacology*

Bernard L. Mirkin

*Drug Metabolism and Disposition*

Edward Bresnick

Vincent G. Zannoni

*Gastrointestinal Pharmacology*

Thomas F. Burks

*Immunopharmacology*

Sydney Spector

*Neuropharmacology*

Charles O. Rutledge

Wallace D. Winters

*Pulmonary Pharmacology*

Mannfred A. Hollinger

*Renal Pharmacology*

William O. Berndt

*Toxicology*

Curtis D. Klaassen

## EDITORIAL ADVISORY BOARD

Martin W. Adler  
Edson X. Albuquerque  
Edmund G. Anderson  
Leslie E. Bailey  
John A. Bevan  
C. Paul Bianchi  
Leslie C. Blaber  
David A. Blake  
John R. Blinks  
Floyd E. Bloom  
Theodore M. Brody  
Theodore J. Cicero  
E. E. Daniel  
William C. de Groat  
Linda Dykstra  
Hugh L. Evans  
James A. Ferrendelli  
Lawrence J. Fischer  
William W. Fleming  
Shri N. Giri  
Dora B. Goldstein  
Frank R. Goodman  
Charles W. Gorodetzky

Robert Z. Gussin  
Anthony J. Hance  
Harold F. Hardman  
Louis S. Harris  
John A. Harvey  
Philip C. Hoffmann  
Jordan L. Holtzman  
Stephen G. Holtzman  
Jerry B. Hook  
David M. Jacobowitz  
Donald R. Jasinski  
Alain F. Junod  
Conan Kornetsky  
Edwin A. Kroeger  
Wayne Levin  
John C. McGiff  
Donald E. McMillan  
Jerry Mitchell  
Perry B. Molinoff  
W. H. Morse  
Mary J. Mycek  
Robert A. Neal  
Achillos J. Pappano  
William A. Pettinger

Larissa A. Pohorecky  
James W. Putney, Jr.  
Arthur Raines  
G. Alan Robison  
C. R. Ross  
Betty I. Sasyniuk  
Arnold Schwartz  
Lewis S. Seiden  
Eric J. Simon  
Roger P. Smith  
Robert I. Taber  
A. E. Takemori  
Robert TenEick  
Thomas R. Tephly  
C. D. Thron  
U. Trendelenburg  
Betty M. Twarog  
Norman J. Uretsky  
Martin A. Wasserman  
Richard M. Welch  
David P. Westfall  
Martin M. Winbury  
Ben G. Zimmerman

## BOARD OF PUBLICATIONS TRUSTEES

NORMAN WEINER, *Chairman*; GEORGE I. DRUMMOND, LEON I. GOLDBERG, EVA KING KILLAM,  
NORMAN KIRSHNER, KENNETH C. LEIBMAN, GILBERT J. MANNING,  
WALTER MODELL, PAUL L. MUNSON, SIDNEY UDENFRIEND

## EXECUTIVE OFFICER OF THE SOCIETY

HOUSTON BAKER

JPETAB

**COPYRIGHT © 1980 BY THE WILLIAMS & WILKINS COMPANY**