



New Insights Into Drug Discovery

Medicinal Research Reviews

Editor

George deStevens
Drew University

Editorial Board

Sydney Archer
Rensselaer Polytechnic
Institute

E.J. Ariens
University of Nijmegen

W.L.F. Armarego
John Curtin School of
Medical Research, Canberra

Arnold Bossi
National Institutes of Health,

John F. Cavalla
Wyeth Laboratories

Neville Finch Ford
Washington University
School of Medicine

Tetsuji Kametani
Hoshi College of Pharmacy,
Tokyo

Everette L. May
Medical College of Virginia

Miguel A. Ondetti
The Squibb Institute for
Medical Research

Rodolfo Paoletti
University of Milan

Howard J. Schaeffer
Burroughs Wellcome
Company

T.Y. Shen
Merck, Sharp & Dohme
Research Laboratories

Csaba Szántay
Technical University,
Budapest

Editorial Associate

Stanley F. Kudzin
S.U.N.Y. at New Paltz

This review journal embraces all aspects of research addressing the study of disease states and the consequent development of therapeutic agents. It features developments in specific areas of medicinal research, including a total review of the history leading up to the introduction of a new pharmaceutical.

Recent and Forthcoming Articles

Fertility Control, M.J.K. Harper

Synthetic Analogues for the Study of GABA as a Neurotransmitter, G. Johnston and R. Allan

Carcinogenicity and Its Effect on Research Programs, R.J. Van Ryzin

6-Ketomorphinans and Their Analgetic Properties, A. Bossi and H. Schmidhammer

Human Interferon, S. Pestka

Piroxicam and Other Antiinflammatory Oxicams, J.G. Lombardino and E.H. Wiseman

Angiotensin Converting Enzyme Inhibitors: Medicinal Chemistry and Biological Actions, M.A. Ondetti and E.W. Petrillo, Jr.

Theoretical Approaches to Drug Design and Biological Activity, P.P. Mager

Recent Synthetic Anticoccidial Agents, Y. Morisawa

Central Actions of Nicotine, M.D. Aceto and B.R. Martin

An Analysis of the Stereochemical Structure-Activity Relationships of C-Methyl Derivatives of the Reversed Ester of Meperidine, A.F. Casy

Clozapin, E.J. Glamkowski

The Role of Toxicology in Drug Research and Development, V.M. Traina

Clinical Application of Platelet Inhibitors in Vascular Diseases, W.W. Fields

Glycolysis Regulation in Normal and Cancer Cells, H. Glossmann and E. Eigenbroth

Naloxone and Naltrexone, M.S. Gold

*Volume 2, 1982 • Quarterly
\$55 per year*

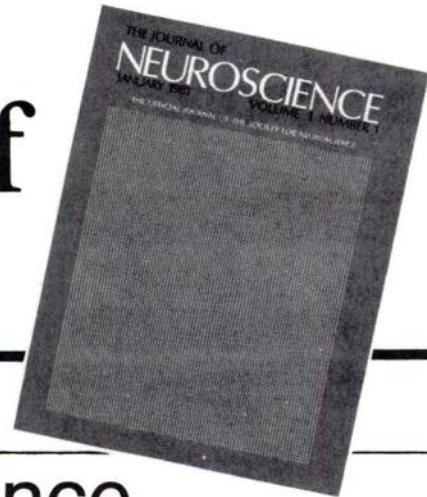
*Outside U.S. add \$9 for surface
postage and handling; add \$40
for airmail delivery.*

*Order through your subscription
agent or directly from:*

Subscription Dept. 2-1585
JOHN WILEY & SONS
605 Third Avenue, New York, NY 10158



Tap into the broadest international coverage of the most rapidly growing branch of biological science



The Journal of Neuroscience *the Official Journal of the Society for Neuroscience*

You need **The Journal of Neuroscience** NOW, because there's no better way to keep up with crucial advances that affect YOUR work.

You need its interdisciplinary coverage, its scouting of findings in all areas of neuroscience. You'll appreciate the way it mirrors the objectives of the North American Society for Neuroscience, as well as the Societies in Europe and Japan. And the way it keeps you absolutely up-to-date, no matter where significant breakthroughs occur.

Here's a sampling of recent* articles:

- Morphology and Synaptic Connections of Ultrafine Primary Axons in Lamina I of the Spinal Dorsal Horn: Candidates for the Terminal Axonal Arbors of Primary Neurons with Unmyelinated (C) Axons
- *In Vitro* Resetting of the Circadian Clock in the *Aplysia* Eye
- Rohon-Beard Neurons Arise from a Substitute Ancestral Cell after Removal of the Cell from Which They Normally Arise in the 16-Cell Frog Embryo
- Postnatal Development of Dopaminergic Neurons in the Rabbit Retina
- Brain Peptidase with a Unique Neuronal Localization: The Histochemical Distribution of Dipeptidyl — aminopeptidase II
- Developmental Stage-specific Changes in Lectin Binding to Mouse Cerebellar Cells *In Vitro*
- The Laminar Origin and Distribution of the Crossed Tectoreticular Pathways

Section Editors

Molecular Neuroscience

Solomon H. Snyder

Cellular Neuroscience

Michael V. Bennett

Developmental Neuroscience

Gerald D. Fischbach

Neural Systems

Edward V. Evarts

R. W. Guillery

Behavioral Neuroscience

Eric R. Kandel

The Journal is edited by W. Maxwell Cowan of the Salk Institute for Biological Studies. The Board of Publication Trustees includes Julius Axelrod, Herbert H. Jasper, Seymour S. Kety, Vernon B. Mountcastle, Walle J. H. Nauta, and Pedro N. Rudomin.

Encourage your library to subscribe, and start using this first-rate journal. The institutional fee for a year's subscription is \$230.00. Once your department or institution subscribes, YOU can subscribe for the discount individual rate of \$60.00.

SEND IN THIS COUPON TODAY.

Please sign me up for a year's subscription to **The Journal of Neuroscience**, starting in January, 1982.

Institutional: \$230.00

Discount Individual: \$60.00 (With Institutional subscription).

(Add \$20.00 outside the US)

PAYMENT Check enclosed Bill me MasterCard VISA

Card Number

Expiration

Name

Address

City

State

Zip

ORDER FREE BY PHONE: To order with or without credit card, call 1-800-638-0672 between 9 am and 4 p.m. Maryland residents call collect, 528-4221.



Williams & Wilkins

Dept. 374, P.O. Box 1496, Balto., MD 21203

JONAD 90530

*from the August and October 1981 issues.

PHARMACOLOGICAL REVIEWS

PAUL L. MUNSON, *Editor*

Associate Editors

ARTHUR J. ATKINSON, JR.

PETER B. DEWS

JAMES R. FOUTS

JOHN S. GILLESPIE

ROBERT E. HANDSCHUMACHER

LOUIS S. HARRIS

MARGARETHE HOLZBAUER

STEN JACOBSEN

DONALD H. JENKINSON

IRWIN J. KOPIN

BARBARA R. RENNICK

SUNE ROSELL

JENS SCHOU

ULLRICH G. TRENDELENBURG

JOUKO TUOMISTO

JOAN VERNIKOS-DANELIS

HOUSTON BAKER, *Executive Officer*

VOLUME 33
1981

BALTIMORE, MARYLAND

PAREAQ

PHARMACOLOGICAL REVIEWS

VOLUME 33
NUMBER 4
December 1981

A quarterly publication in pharmacology, experimental therapeutics, toxicology, and chemotherapy published for the **American Society for Pharmacology and Experimental Therapeutics, Inc.**, under the supervision of the Board of Publications Trustees: **NORMAN WEINER**, *Chairman*, **JAMES A. BAIN**, **ALLAN H. CONNEY**, **GEORGE DRUMMOND**, **LEON I. GOLDBERG**, **EVA KING KILLAM**, **NORMAN KIRSHNER**, **KENNETH C. LEIBMAN**, **WALTER MODELL**, **PAUL L. MUNSON**, **CLEMENT A. STONE**, **HOUSTON BAKER** (*ex officio*).

The editorial supervision of **Pharmacological Reviews** is shared jointly with the **British Pharmacological Society** and the **Scandinavian Pharmacological Societies**.

Editor

PAUL L. MUNSON
Chapel Hill

Associate Editors

ARTHUR J. ATKINSON, JR.
Chicago
PETER B. DEWS
Boston
JAMES R. FOUTS
Research Triangle Park
JOHN S. GILLESPIE
Glasgow
ROBERT E. HANDSCHUMACHER
New Haven
LOUIS S. HARRIS
Richmond
MARGARETHE HOLZBAUER
Babraham
STEN JACOBSEN
Oslo
DONALD H. JENKINSON
London
IRWIN J. KOPIN
Bethesda
BARBARA R. RENNICK
Buffalo
SUNE ROSELL
Stockholm
JENS SCHOU
Copenhagen
ULLRICH G. TRENDELENBURG
Würzburg
JOUKO TUOMISTO
Kuopio
JOAN VERNIKOS-DANELIS
Moffett Field

Executive Officer

HOUSTON BAKER
Bethesda