

CONTENTS

P. ROBBERECHT, M. DELHAYE, G. TATON, P. DE NEEF, M. WAELEBROECK, J. M. DE SMET, J. L. LECLERC, P. CHATELAIN, AND J. CHRISTOPHE. The Human Heart <i>Beta</i> -Adrenergic Receptors. I. Heterogeneity of the Binding Sites: Presence of 50% <i>Beta</i> ₁ - and 50% <i>Beta</i> ₂ -Adrenergic Receptors	169
M. WAELEBROECK, G. TATON, M. DELHAYE, P. CHATELAIN, J. C. CAMUS, R. POCHET, J. L. LECLERC, J. M. DE SMET, P. ROBBERECHT, AND J. CHRISTOPHE. The Human Heart <i>Beta</i> -Adrenergic Receptors. II. Coupling of <i>Beta</i> ₂ -Adrenergic Receptors with the Adenylate Cyclase System	174
KLAUS AKTORIES, GÜNTER SCHULTZ, AND KARL H. JAKOBS. Somatostatin-Induced Stimulation of a High-Affinity GTPase in Membranes of S49 Lymphoma <i>cyc</i> ⁻ and H21a Variants	183
PIERLUIGI ONALI, CAROLA EVA, MARIA C. OLIANAS, JOAN P. SCHWARTZ, AND ERMINIO COSTA. In GH ₃ Pituitary Cells, Acetylcholine and Vasoactive Intestinal Peptide Antagonistically Modulate Adenylate Cyclase, Cyclic AMP Content, and Prolactin Secretion	+ 189
VINCENT A. FLORIO AND ELLIOTT M. ROSS. Regulation of the Catalytic Component of Adenylate Cyclase: Potentiative Interaction of Stimulatory Ligands and 2',5'-Dideoxyadenosine	195
THOMAS CHOW AND R. SUZANNE ZUKIN. Solubilization and Preliminary Characterization of <i>Mu</i> and <i>Kappa</i> Opiate Receptor Subtypes from Rat Brain	203
GREGORY B. WRIGHT, R. WAYNE ALEXANDER, LAURIE S. ECKSTEIN, AND MICHAEL A. GIMBRONE, JR. Characterization of the Rabbit Ventricular Myocardial Receptor for Angiotensin II: Evidence for Two Sites of Different Affinities and Specificities	213
MICHEL BAUDRY, KATHRYN KRAMER, LAURENT FAGNI, MAX RECASENS, AND GARY LYNCH. Classification and Properties of Acidic Amino Acid Receptors in Hippocampus. II. Biochemical Studies Using a Sodium Efflux Assay	222
MICHEL BAUDRY, KATHRYN KRAMER, AND GARY LYNCH. Classification and Properties of Acidic Amino Acid Receptors in Hippocampus. III. Supersensitivity during the Postnatal Period and following Denervation	229
JERRY R. MILLER, PAUL J. SILVER, AND JAMES T. STULL. The Role of Myosin Light Chain Kinase Phosphorylation in <i>Beta</i> -Adrenergic Relaxation of Tracheal Smooth Muscle	235
MARK FROIMOWITZ AND STEVEN MATTHYSSE. Conformational Properties of Butaclamol and Isobutaclamol: Regularities in the Structures of Semirigid Neuroleptics	243
GERARD D. SCHELLENBERG, LEOJEAN ANDERSON, AND PHILLIP D. SWANSON. Inhibition of Na ⁺ -Ca ²⁺ Exchange in Rat Brain by Amiloride	251
L. HERBETTE, A. M. KATZ, AND J. M. STURTEVANT. Comparisons of the Interaction of Propranolol and Timolol with Model and Biological Membrane Systems	259
B. CYBULSKA, T. ZIMINSKI, E. BOROWSKI, AND C. M. GARY-BOBO. The Influence of Electric Charge of Aromatic Heptaene Macrolide Antibiotics on Their Activity on Biological and Lipidic Model Membranes	270
KATHRYN E. FLAIM, LEONARD S. JEFFERSON, JOAN B. MCGWIRE, AND D. EUGENE RAN- NELS. Effect of Halothane on Synthesis and Secretion of Liver Proteins	277
PETER EYER, ELISABETH LIERHEIMER, AND MIRA STROSAR. Site and Mechanism of Covalent Binding of 4-Dimethylaminophenol to Human Hemoglobin, and Its Implications to the Functional Properties	282

(continued)

MOLECULAR PHARMACOLOGY (ISSN 0026-895x) is published bi-monthly by The American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD. 20814. 1983: Volumes 23-24. Price per volume: USA individual rate \$75.00; all other countries, surface mail \$85.00; air mail \$100.00-\$135.00 depending on location. USA institutional rate \$140.00; all other countries, surface mail \$150.00; air mail \$165.00-\$200.00 depending on location. All subscription orders should be addressed to Molecular Pharmacology, ASPET, 9650 Rockville Pike, Bethesda, MD. 20814. Send notice of address changes at least 6-8 weeks in advance.

Second Class Postage paid at Bethesda, MD. and at additional mailing offices. POSTMASTER send address changes (Form 3579) to 9650 Rockville Pike, Bethesda, MD. 20814.

Copyright © 1983 by The American Society for Pharmacology and Experimental Therapeutics.

CONTENTS (*cont'd*)

JAMES W. TRACY, BRIAN A. CATTO, AND LESLIE T. WEBSTER, JR. Reductive Metabolism of Niridazole by Adult <i>Schistosoma mansoni</i> : Correlation with Covalent Drug Binding to Parasite Macromolecules	291
DAVID A. WIERSMA AND ROBERT A. ROTH. The Prediction of Benzo[<i>a</i>]pyrene Clearance by Rat Liver and Lung from Enzyme Kinetic Data	300
ROBERT I. GLAZER, KATHLEEN D. HARTMAN, AND MARIAN C. KNODE. 9-Deazaadenosine: Cytocidal Activity and Effects on Nucleic Acids and Protein Synthesis in Human Colon Carcinoma Cells in Culture	309
JAMES A. FYFE, SUSAN A. MCKEE, AND PAUL M. KELLER. Altered Thymidine-Thymidylate Kinases from Strains of Herpes Simplex Virus with Modified Drug Sensitivities to Acyclovir and (<i>E</i>)-5-(2-Bromovinyl)-2'-deoxyuridine	316
KENNETH D. TEW, LEONARD C. ERICKSON, GEOFFREY WHITE, ANN L. WANG, PHILIP S. SCHEIN, AND BERYL HARTLEY-ASP. Cytotoxicity of Estramustine, a Steroid-Nitrogen Mustard Derivative, through Non-DNA Targets	324
LINDA S. MULCAHY AND JOSEPH H. GANS. The Fidelity of Mouse Liver Mitochondrial DNA Polymerase following Long-Term Administration of Carbon Tetrachloride, Diethylnitrosamine, or Phenobarbital	329
ROMOLO A. GAMBETTA, AMBROGIO COLOMBO, CINZIA LANZI, AND FRANCO ZUNINO. Purification and Partial Characterization of a Daunorubicin-Binding Protein from Rat Liver	336
MARCO A. ZARBIN, JOSE M. PALACIOS, JAMES K. WAMSLEY, AND MICHAEL J. KUCHAR. Axonal Transport of <i>Beta</i> -Adrenergic Receptors: Antero- and Retrogradely Transported Receptors Differ in Agonist Affinity and Nucleotide Sensitivity	341
ERRATUM	349

Copyright © 1983 by The American Society for Pharmacology and Experimental Therapeutics

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of this article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc., (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1983 articles are the same as those shown for current articles.