

## CONTENTS

ROBERT H. LENOX, JOHN ELLIS, DEE VAN RIPER, AND YIGAL H. EHRLICH. <i>Alpha</i> <sub>2</sub> -Adrenergic Receptor-Mediated Regulation of Adenylate Cyclase in the Intact Human Platelet: Evidence for a Receptor Reserve .....	+ 1 ✓
JAMES D. MARSH AND THOMAS W. SMITH. Receptors for $\beta$ -Adrenergic Agonists in Cultured Chick Ventricular Cells: Relationship between Agonist Binding and Physiologic Effect .....	10
MARSHALL D. SNAVELY, MICHAEL G. ZIEGLER, AND PAUL A. INSEL. A New Approach to Determine Rates of Receptor Appearance and Disappearance <i>in Vivo</i> : Application to Agonist-Mediated Down-regulation of Rat Renal Cortical $\beta_1$ - and $\beta_2$ -Adrenergic Receptors .....	+ 19 ✓
GABRIEL SCHREIBER AND MORDECHAI SOKOLOVSKY. Muscarinic Receptor Heterogeneity Revealed by Interaction with Breylium Tosylate: Different Ligand-Receptor Conformations versus Different Receptor Subclasses .....	27
TONY EVANS, MICHAEL W. MARTIN, ARLENE R. HUGHES, AND T. KENDALL HARDEN. Guanine Nucleotide-Sensitive, High Affinity Binding of Carbachol to Muscarinic Cholinergic Receptors of 1321N1 Astrocytoma Cells Is Insensitive to Pertussis Toxin .....	32
SULEIMAN W. BAHOUTH, DEANA M. LAZARO, DEREK E. BRUNDISH, AND JOSÉ M. MUSACCHIO. Specific Binding of [ <sup>3</sup> H-Tyr <sup>8</sup> ]Physalaemin to Rat Submaxillary Gland Substance P Receptor .....	+ 38
YOSSEF ITZHAK, JACOB M. HILLER, AND ERIC J. SIMON. Characterization of Specific Binding Sites for [ <sup>3</sup> H]( <i>d</i> )- <i>N</i> -Allylnormetazocine in Rat Brain Membranes .....	46
E. W. KARBON AND S. J. ENNA. Characterization of the Relationship between $\gamma$ -Aminobutyric Acid B Agonists and Transmitter-Coupled Cyclic Nucleotide-Generating Systems in Rat Brain .....	53
L. E. HEASLEY, J. AZARI, AND L. L. BRUNTON. Export by Cyclic AMP from Avian Red Cells: Independence from Major Membrane Transporters and Specific Inhibition by Prostaglandin A <sub>1</sub> .....	60
SUZANNE G. LAYCHOCK. Phosphatidylethanolamine <i>N</i> -Methylation and Insulin Release in Isolated Pancreatic Islets of the Rat .....	66
PETER G. BRADFORD AND RONALD P. RUBIN. Characterization of Formylmethionyl-Leucyl-Phenylalanine Stimulation of Inositol Trisphosphate Accumulation in Rabbit Neutrophils .....	74
MATHEW ALLEN AND ANTHONY T. TU. The Effect of Tryptophan Modification on the Structure and Function of a Sea Snake Neurotoxin .....	79
GILLES KLOPMAN AND RENATO CONTRERAS. Use of Artificial Intelligence in Structure-Activity Correlations of Anticonvulsant Drugs .....	86
JANENDRA K. BATRA, LEONARD JURD, AND ERNEST HAMEL. Structure-Function Studies with Derivatives of 6-Benzyl-1,3-benzodioxole, a New Class of Synthetic Compounds Which Inhibit Tubulin Polymerization and Mitosis .....	94
LUCIANO CELLAI, SILVIO CERRINI, ANNALaura SEGRE, CLAUDIO BATTISTONI, GIANNI COSSU, GIULIA MATTOGNO, MARIO BRUFANI, AND EGIDIO MARCHI. A Study of Structure-Activity Relationships in 4-Deoxypyrido[1',2'-1,2]imidazo[5,4-c]rifamycin SV Derivatives by Electron Spectroscopy for Chemical Analysis and <sup>1</sup> H NMR .....	103
GREGORY A. REED, IRENE O. GRIFFIN, AND THOMAS E. ELING. Activation of Prostaglandin H Synthase and Prostacyclin Synthase by Phenylbutazone: Requirement for Peroxidative Metabolism .....	109

Continued

MOLECULAR PHARMACOLOGY (ISSN 0026-895x) is published bi-monthly by The American Society for Pharmacology and Experimental Therapeutics, 428 East Preston Street, Baltimore, MD 21202. 1985: Volumes 27-28. Price per year: USA individual rate \$75.00; all other countries, surface mail \$90.00. USA institutional rate \$165.00; all other countries, surface mail \$180.00. All subscription orders should be addressed to Molecular Pharmacology, Williams & Wilkins Co., 428 East Preston Street, Baltimore, MD 21202. Send notice of address changes at least 6-8 weeks in advance.

Second Class Postage paid at Baltimore, MD, and at additional mailing offices. POSTMASTER send address changes (Form 3579) to 428 East Preston Street, Baltimore, MD 21202.

Copyright © 1985 by The American Society for Pharmacology and Experimental Therapeutics.

CONTENTS (cont'd)

WILLIAM H. BULGER, VERNON J. FEIL, AND DAVID KUPFER. Role of Hepatic Monooxygenases in Generating Estrogenic Metabolites from Methoxychlor and from Its Identified Contaminants .....	115
A. RUTH STEWARD, GHAZI A. DANNAN, PHILIP S. GUZELIAN, AND F. PETER GUENGERICH. Changes in the Concentration of Seven Forms of Cytochrome P-450 in Primary Cultures of Adult Rat Hepatocytes .....	125
LENNART DENCKER, EZDIHAR HASSOUN, ROLAND D'ARGY, AND GUNNAR ALM. Fetal Thymus Organ Culture as an <i>in Vitro</i> Model for the Toxicity of 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin and Its Congeners .....	133
ANDRE ROSOWSKY, RONALD A. FORSCH, JOHN GALIVAN, SANDRA S. SUSTEN, AND JAMES H. FREISHEIM. Regiospecific $\gamma$ -Conjugation of Methotrexate to Poly(L-lysine): Chemical and Biological Studies .....	141
S. NOOR MOHAMMAD. A Quantum Mechanical Approach to the Theory of Cancer from Polynuclear Compounds: Metabolic Activation and Carcinogenicity of Extended Anilines and Aminoazo Compounds .....	148
RICHARD G. MORAN, PAUL D. COLMAN, ANDRE ROSOWSKY, RONALD A. FORSCH, AND KENNETH K. CHAN. Structural Features of 4-Amino Antifolates Required for Substrate Activity with Mammalian Folylpolyglutamate Synthetase .....	156
GURMIT SINGH, WILLIAM W. HAUSWIRTH, WARREN E. ROSS, AND ALLEN H. NEIMS. A Method for Assessing Damage to Mitochondrial DNA Caused by Radiation and Epichlorohydrin .....	167

---

Copyright © 1985 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-1985 articles are the same as those shown for current articles.