

CONTENTS OF VOLUME 17

NUMBER 1, JANUARY 1980

KENNETH P. MINNEMAN, GREGORY A. WEILAND AND PERRY B. MOLINOFF. A Comparison of the <i>Beta</i> -Adrenergic Receptor of the Turkey Erythrocyte with Mammalian <i>Beta</i> ₁ and <i>Beta</i> ₂ Receptors.	1
OSAMU HAZEKI AND MICHIO UI. <i>Beta</i> ₁ - and <i>Beta</i> ₂ -Adrenergic Receptors Responsible for Cyclic AMP Accumulation in Isolated Heart and Lung Cells.	8
RICHARD S. KENT, ANDRE DE LEAN AND ROBERT J. LEFKOWITZ. A Quantitative Analysis of <i>Beta</i> -Adrenergic Receptor Interactions: Resolution of High and Low Affinity States of the Receptor by Computer Modeling of Ligand Binding Data.	14
FREDERICK J. EHLERT, NORIO KOKKA AND ALAN S. FAIRHURST. Altered [³ H]-Quinuclidinyl Benzilate Binding in the Striatum of Rats following Chronic Cholinesterase Inhibition with Diisopropylfluorophosphate.	24
ROBERT B. DICKSON AND ARNOLD J. EISENFELD. <i>In Vitro</i> Nuclear Translocation of the Estrogen Receptor in the Hepatic Parenchymal Cell from Male Rats.	31
CHARLES A. HARBERT, JACOB J. PLATTNER, WILLARD M. WELCH, ALBERT WEISSMAN AND B. KENNETH KOE. Neuroleptic Activity of the 5-Aryltetrahydro- γ -carboline Series. Conformational Requirements for Interaction with Central Dopamine Receptors.	38
DWIGHT S. FULLERTON, KOUICHI YOSHIOKA, DOUGLAS C. ROHRER, ARTHUR H. L. FROM AND KHALIL AHMED. A Crystallographic, Conformational Energy, and Biological Study of Actodigin (AY-22,241) and Its Genin.	43
DAVID A. JOHNSON, NANCY M. LEE, ROGER COOKE AND HORACE LOH. Adaptation to Ethanol-Induced Fluidization of Brain Lipid Bilayers: Cross-Tolerance and Reversibility.	52
BARBARA L. REICHERT AND MOHAMED B. ABOU-DONIA. Inhibition of Fast Axoplasmic Transport by Delayed Neurotoxic Organophosphorus Esters: A Possible Mode of Action.	56
PRISCILLA NASH-ADLER, CHARLES F. LOUIS, GARY FUDYMA AND ARNOLD M. KATZ. The Modification of Unidirectional Calcium Fluxes by Dibucaine in Sarcoplasmic Reticulum Vesicles from Rabbit Fast Skeletal Muscle.	61
HIROYOSHI HIDAKA, TOKUO YAMAKI, MICHIKO NAKA, TOSHIO TANAKA, HARUKI HAYASHI AND RYOJI KOBAYASHI. Calcium-Regulated Modulator Protein Interacting Agents Inhibit Smooth Muscle Calcium-Stimulated Protein Kinase and ATPase.	66
G. L. KRAMER AND J. N. WELLS. Xanthines and Skeletal Muscle: Lack of Relationship between Phosphodiesterase Inhibition and Increased Twitch Tension in Rat Diaphragms.	73
KEITH A. MARKEY, SHIGERU KONDO, LOUIS SHENKMAN AND MENEK GOLDSTEIN. Purification and Characterization of Tyrosine Hydroxylase from a Clonal Pheochromocytoma Cell Line.	79
ALAN POLAND AND EDWARD GLOVER. 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin: Segregation of Toxicity with the Ah Locus.	86
SU-SHU PAN AND NICHOLAS R. BACHUR. Xanthine Oxidase Catalyzed Reductive Cleavage of Anthracycline Antibiotics and Free Radical Formation.	95
SEYMOUR MONG, VIRGIL H. DUVERNAY, JAMES E. STRONG AND STANLEY T. CROOKE. Interaction of Anthracyclines with Covalently Closed Circular DNA.	100
JOHN GALIVAN. Evidence for the Cytotoxic Activity of Polyglutamate Derivatives of Methotrexate.	105
ROBERT I. GLAZER, ANN L. PEALE, JOHN A. BEISLER AND MOHAMED M. ABBASI. The Effect of 5-Azacytidine and Dihydro-5-azacytidine on Nuclear Ribosomal RNA and Poly(A) RNA Synthesis in L1210 Cells <i>in Vitro</i>	111
DENNIS R. KOOP AND PAUL F. HOLLENBERG. Liver Microsomal Metabolism of <i>N</i> -Methylcarbazole: A Probe for Induction, Inhibition, and Species Differences.	118
RAYMOND F. NOVAK, DENNIS R. KOOP AND PAUL F. HOLLENBERG. Liver Microsomal Metabolism of <i>N</i> -Methylcarbazole: Structural Identification of the Four Major Metabolites of <i>N</i> -Methylcarbazole using ¹ H Fourier Transform NMR Spectroscopy.	128

SHORT COMMUNICATION

C.-Y. KWAN, L. BELBECK AND E. E. DANIEL. Abnormal Biochemistry of Vascular Smooth Muscle Plasma Membrane Isolated from Hypertensive Rats.	137
NUMBER 2, MARCH 1980	
RICHARD R. ALMON AND JOHN E. MARTNER. Muscarinic Sites in the Amphibian Central Nervous System: Characterization and Temperature Studies	141
RONALD J. LUKAS AND EDWARD L. BENNETT. Interaction of Nicotinic Receptor Affinity Reagents with Central Nervous System α -Bungarotoxin-Binding Entities	149
MICHAEL P. DONOVAN, LONNIE G. SCHEIN AND JOHN A. THOMAS. Inhibition of Androgen-Receptor Interaction in Mouse Prostate Gland Cytosol by Divalent Metal Ions	156
GEORGES VAUQUELIN, SERGE BOTTARI AND A. DONNY STROSBERG. Inactivation of β -Adrenergic Receptors by <i>N</i> -Ethylmaleimide: Permissive Role of β -Adrenergic Agents in Relation to Adenylate Cyclase Activation	163
AMIRA T. ELDEFRAWI, NABIL M. BAKRY, MOHYEE E. ELDEFRAWI, MING-CHENG TSAI AND EDSON X. ALBUQUERQUE. Nereistoxin Interaction with the Acetylcholine Receptor-Ionic Channel Complex	172
OTTO-ERICH BRODDE, HANS-JOACHIM SCHÜMANN AND JOACHIM WAGNER. Decreased Responsiveness of the Adenylate Cyclase System on Left Atria from Hypothyroid Rats	180
SYLVIE GLASSON, ROLAND ZINI, PHILIPPE D'ATHIS, JEAN PAUL TILLEMENT AND JACQUES R. BOISSIER. The Distribution of Bound Propranolol between the Different Human Serum Proteins	187
ROSA H. HUANG. Lipid-Protein Interaction in the Multiple Forms of Monoamine Oxidase. Enzymatic and ESR Studies with Purified Intact Rat Brain Mitochondria	192
MARIA R. CASTRO COSTA AND XANDRA O. BREAKEFIELD. Electrophoretic Analysis of ³ H-Pargyline-Labeled Monoamine Oxidases A and B from Human and Rat Cells	199
C. W. DAVIS AND J. W. DALY. Activation of Rat Cerebral Cortical 3',5'-Cyclic Nucleotide Phosphodiesterase Activity by Gangliosides	206
MICHAEL J. WILSON, ALAN T. DAVIS AND KHALIL AHMED. Effects of Antiandrogens (Cyproterone Acetate and Flutamide) on the Activity of Nuclear Protein Phosphokinases and Phosphatases of Rat Ventral Prostate	212
GEORGE E. SCHWAB, RICHARD L. NORMAN, URSULA MULLER-EBERHARD AND ERIC F. JOHNSON. Identification of the Form of Cytochrome <i>P</i> -450 Induced in Neonatal Rabbit Liver Microsomes by Phenobarbital	218
C. J. OMIECINSKI, M. J. NAMKUNG AND M. R. JUCHAU. Mechanistic Aspects of the Hematin-Mediated Increases in Brain Monooxygenase Activities	225
GERALD M. ROSEN AND ELMER J. RAUCKMAN. Spin Trapping of the Primary Radical Involved in the Activation of the Carcinogen <i>N</i> -Hydroxy-2-acetylaminofluorene by Cumene Hydroperoxide-Hematin	233
EDWARD PEREZ-REYES, B. KALYANARAMAN AND RONALD P. MASON. The Reductive Metabolism of Metronidazole and Ronidazole by Aerobic Liver Microsomes	239
ROBERT I. GLAZER AND KATHLEEN D. HARTMAN. The Effect of 5-Fluorouracil on the Synthesis and Methylation of Low Molecular Weight Nuclear RNA in L1210 Cells ...	245
ROBERT I. GLAZER AND KATHLEEN D. HARTMAN. The Comparative Effects of 5-Azacytidine and Dihydro-5-azacytidine on 4 S and 5 S Nuclear RNA	250
GERALD B. GRINDEY, MARJORIE WINKLER, MAUREEN OTTEN AND JAY A. STEINBERG. Inhibition of Calf Thymus DNA Polymerase- α by Deoxyribonucleoside Triphosphates	256
ERNEST A. ALBANESE AND GEORGE P. STUDZINSKI. Metabolism of Puromycin Aminonucleoside in Transformed Human Lung Fibroblasts and the Mechanism of Its Inhibition of RNA Synthesis	262
P. ROBBERECHT, M. DESCHODT-LANCKMAN, M.-C. WOUSSEN-COLLE, P. DE NEEF, J. C. CAMUS AND J. CHRISTOPHE. Butyryl Derivatives of Cyclic GMP Interfere with the Biological and the Immunological Properties of the Pancreozymin-Gastrin Family of Peptides	268
ARCHIE A. MACKINNEY, RAMLAL VYAS, CAROLYN MUELLER AND CHERNA GORDER. A Comparison of Potency of Hydantoins in Metaphase Arrest and Inhibition of Microtubular Polymerization	275

SHORT COMMUNICATION

ROBERT I. GLAZER AND MICHEL LEGRAVEREND. The Effect of 5-Fluorouridine 5'-Triphosphate on RNA Transcribed in Isolated Nuclei <i>in Vitro</i>	279
ERRATUM	283

NUMBER 3, MAY 1980

MAHARAJ K. TICKU, ANN HUANG AND JEFFERY L. BARKER. Characterization of γ -Aminobutyric Acid Receptor Binding in Cultured Brain Cells	285
LEO G. ABOOD, MADELINE BUTLER, AND DEBORAH REYNOLDS. Effect of Calcium and Physical State of Neural Membranes on Phosphatidylserine Requirement for Opiate Binding	290
JAMES P. CHOVAN, ELLIOTT C. KULAKOWSKI, STEVEN SHEAKOWSKI AND STEPHEN W. SCHAFER. Calcium Regulation by the Low-Affinity Taurine Binding Sites of Cardiac Sarcolemma	295
TAM THANH QUACH, ANNE-MARIE DUCHEMIN, CHRISTIANE ROSE AND JEAN-CHARLES SCHWARTZ. ^3H -Glycogen Hydrolysis Elicited by Histamine in Mouse Brain Slices: Selective Involvement of H_1 Receptors	301
TERRY P. KENAKIN AND DAVID A. COOK. The Effect of Desensitization on the Antagonism of the Histamine Response by Phenoxybenzamine	309
MORLEY D. HOLLENBERG AND HAROLD GREGORY. Epidermal Growth Factor-Urogastone: Biological Activity and Receptor Binding of Derivatives	314
R. A. MAXWELL, R. M. FERRIS, E. C. WOODWARD, F. L. M. TANG AND S. B. ECKHARDT. Structure-Activity Relationships for Potent Phthalane and Thiophthalane Inhibitors of Norepinephrine Uptake. A Comparison with Desipramine and Related Compounds	321
CYNTHIA F. BEARER, ROGER D. KNAPP, A. J. KAUMANN, THEODORE L. SWARTZ AND LUTZ BIRNBAUMER. Iodoxyhydroxybenzylpindolol: Preparation, Purification, Localization of Its Iodine to the Indole Ring, and Characterization as a Partial Agonist	328
JEAN-MICHEL LEGER, MICHEL GADRET AND ALAIN CARPY. β -Adrenergic Drugs: Analysis of Crystallographic and Theoretical Results	339
NURAN M. KUMBARACI AND WILLIAM L. NASTUK. Effects of Δ^9 -Tetrahydrocannabinol on Excitable Membranes and Neuromuscular Transmission	344
PETER HONERJÄGER, MELCHIOR REITER AND PETER F. BAKER. Inhibition of the Sodium Pump in Squid Axons by the Cardioactive Drug AR-L 57	350
WILLIAM F. BENNETT, JOHN S. BELVILLE AND GARY LYNCH. The Relationship between Extracellular pH and Control of Blood Platelet Serotonin Secretion	356
MONIQUE THOMASSET, PAULETTE CUISINIER-GLEIZES, HENRI MATHIEU AND HECTOR F. DELUCA. Intestinal Calcium-Binding Protein (CaBP) and Bone Calcium Mobilization in Response to $1,24(\text{R}),25-(\text{OH})_2\text{D}_3$. Comparative Effects of $1,25-(\text{OH})_2\text{D}_3$ and $24(\text{R}),25-(\text{OH})_2\text{D}_3$ in Rats.	362
EUGENE PATTERSON, HAROLD E. RADTKE AND WENDELL W. WEBER. Immunochemical Studies of Rabbit <i>N</i> -Acetyltransferases	367
YOSHITSUGI TAIRA, JAN A. REDICK AND JEFFREY BARON. An Immunohistochemical Study on the Localization and Distribution of NADPH-Cytochrome <i>c</i> (<i>P</i> -450) Reductase in Rat Liver	374
BARBARA C. F. CHU AND JOHN M. WHITELEY. The Interaction of Carrier-Bound Methotrexate with L 1210 Cells	382
TERRY A. BEERMAN AND MARY W. GUTAI. DNA Damage in Neocarzinostatin-, Macromycin-, and Bleomycin-Treated SV40 Virions	388
ROKEA EL AZHARY, KENNETH W. RENTON AND GILBERT J. MANNERING. Effect of Interferon Inducing Agents (Polyriboinosinic Acid-Polyribocytidylic Acid and Tilorone) on the Heme Turnover of Hepatic Cytochrome <i>P</i> -450	395
DOUGLAS J. KORNBRUST AND RICHARD D. MAVIS. Microsomal Lipid Peroxidation. I. Characterization of the Role of Iron and NADPH	400
DOUGLAS J. KORNBRUST AND RICHARD D. MAVIS. Microsomal Lipid Peroxidation. II. Stimulation by Carbon Tetrachloride	408
MICHAEL R. FRANKLIN, C. ROLAND WOLF, COSETTE SERABJIT-SINGH AND RICHARD M. PHILPOT. Quantitation of Two Forms of Pulmonary Cytochrome <i>P</i> -450 in Microsomes, Using Substrate Specificities	415

SHORT COMMUNICATIONS

EMANUEL J. DILIBERTO, JR., AND PAMELA L. ALLEN. Semidehydroascorbate as a Product of the Enzymic Conversion of Dopamine to Norepinephrine. Coupling of Semidehydroascorbate Reductase to Dopamine-β-Hydroxylase	421
JAMES HALPERT AND ROBERT A. NEAL. Inactivation of Purified Rat Liver Cytochrome P-450 by Chloramphenicol	427
BIRANDRA K. SINHA AND MICHAEL G. COX. Stimulation of Superoxide Formation by Actinomycin D and Its N²-Substituted Spin-Labeled Derivatives	432
AUTHOR INDEX FOR VOLUME 17	435

The Subject Index for Volume 17 will appear in the November 1980 issue as part of a cumulative index for the year 1980.

CONTENTS

KENNETH P. MINNEMAN, GREGORY A. WEILAND AND PERRY B. MOLINOFF. A Comparison of the <i>Beta</i> -Adrenergic Receptor of the Turkey Erythrocyte with Mammalian <i>Beta</i> ₁ and <i>Beta</i> ₂ Receptors.	1
OSAMU HAZEKI AND MICHIO UI. <i>Beta</i> ₁ - and <i>Beta</i> ₂ -Adrenergic Receptors Responsible for Cyclic AMP Accumulation in Isolated Heart and Lung Cells.	8
RICHARD S. KENT, ANDRE DE LEAN AND ROBERT J. LEFKOWITZ. A Quantitative Analysis of <i>Beta</i> -Adrenergic Receptor Interactions: Resolution of High and Low Affinity States of the Receptor by Computer Modeling of Ligand Binding Data.	14
FREDERICK J. EHLERT, NORIO KOKKA AND ALAN S. FAIRHURST. Altered [³ H]-Quinuclidinyl Benzilate Binding in the Striatum of Rats following Chronic Cholinesterase Inhibition with Diisopropylfluorophosphate.	24
ROBERT B. DICKSON AND ARNOLD J. EISENFELD. <i>In Vitro</i> Nuclear Translocation of the Estrogen Receptor in the Hepatic Parenchymal Cell from Male Rats.	31
CHARLES A. HARBERT, JACOB J. PLATTNER, WILLARD M. WELCH, ALBERT WEISSMAN AND B. KENNETH KOE. Neuroleptic Activity of the 5-Aryltetrahydro- γ -carboline Series. Conformational Requirements for Interaction with Central Dopamine Receptors.	38
DWIGHT S. FULLERTON, KOUICHI YOSHIOKA, DOUGLAS C. ROHRER, ARTHUR H. L. FROM AND KHALIL AHMED. A Crystallographic, Conformational Energy, and Biological Study of Actodigin (AY-22,241) and Its Genin.	43
DAVID A. JOHNSON, NANCY M. LEE, ROGER COOKE AND HORACE LOH. Adaptation to Ethanol-Induced Fluidization of Brain Lipid Bilayers: Cross-Tolerance and Reversibility.	52
BARBARA L. REICHERT AND MOHAMED B. ABOU-DONIA. Inhibition of Fast Axoplasmic Transport by Delayed Neurotoxic Organophosphorus Esters: A Possible Mode of Action.	56
PRISCILLA NASH-ADLER, CHARLES F. LOUIS, GARY FUDYMA AND ARNOLD M. KATZ. The Modification of Unidirectional Calcium Fluxes by Dibucaine in Sarcoplasmic Reticulum Vesicles from Rabbit Fast Skeletal Muscle.	61
HIROYOSHI HIDAKA, TOKUO YAMAKI, MICHIKO NAKA, TOSHIO TANAKA, HARUKI HAYASHI AND RYOJI KOBAYASHI. Calcium-Regulated Modulator Protein Interacting Agents Inhibit Smooth Muscle Calcium-Stimulated Protein Kinase and ATPase.	66
G. L. KRAMER AND J. N. WELLS. Xanthines and Skeletal Muscle: Lack of Relationship between Phosphodiesterase Inhibition and Increased Twitch Tension in Rat Diaphragms.	73
KEITH A. MARKEY, SHIGERU KONDO, LOUIS SHENKMAN AND MENEK GOLDSTEIN. Purification and Characterization of Tyrosine Hydroxylase from a Clonal Pheochromocytoma Cell Line.	79
ALAN POLAND AND EDWARD GLOVER. 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin: Segregation of Toxicity with the Ah Locus.	86
SU-SHU PAN AND NICHOLAS R. BACHUR. Xanthine Oxidase Catalyzed Reductive Cleavage of Anthracycline Antibiotics and Free Radical Formation.	95

(continued)

Published bimonthly by Academic Press, Inc., 111 Fifth Avenue, New York, N.Y. 10003

1980: Volumes 17-18. Price per volume: \$65.00 U.S.A.; \$74.50 outside U.S.A.

All prices include postage and handling.

Information regarding personal subscription rates may be obtained by writing to the Publisher.

All correspondence and subscription orders should be addressed to the office of Publishers

111 Fifth Avenue, New York, N.Y. 10003.

Send notices of change of address to the office of the Publishers at least 6-8 weeks in advance.

Please include both old and new addresses.

Second class postage paid at New York, N.Y. and at additional mailing office.

Copyright © 1980 by The American Society for Pharmacology and Experimental Therapeutics

CONTENTS (*cont'd*)

SEYMOUR MONG, VIRGIL H. DUVERNAY, JAMES E. STRONG AND STANLEY T. CROOKE. Interaction of Anthracyclines with Covalently Closed Circular DNA.	100
JOHN GALIVAN. Evidence for the Cytotoxic Activity of Polyglutamate Derivatives of Methotrexate.	105
ROBERT I. GLAZER, ANN L. PEALE, JOHN A. BEISLER AND MOHAMED M. ABBASI. The Effect of 5-Azacytidine and Dihydro-5-azacytidine on Nuclear Ribosomal RNA and Poly(A) RNA Synthesis in L1210 Cells <i>in Vitro</i>	111
DENNIS R. KOOP AND PAUL F. HOLLENBERG. Liver Microsomal Metabolism of <i>N</i> -Methylcarbazole: A Probe for Induction, Inhibition, and Species Differences.	118
RAYMOND F. NOVAK, DENNIS R. KOOP AND PAUL F. HOLLENBERG. Liver Microsomal Metabolism of <i>N</i> -Methylcarbazole: Structural Identification of the Four Major Metabolites of <i>N</i> -Methylcarbazole using ¹ H Fourier Transform NMR Spectroscopy.	128
SHORT COMMUNICATION	
C.-Y. KWAN, L. BELBECK AND E. E. DANIEL. Abnormal Biochemistry of Vascular Smooth Muscle Plasma Membrane Isolated from Hypertensive Rats.	137

Copyright © 1990 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 the 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. (Operations Staff, P.O. Box 765, Schenectady, New York 12301), 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-1990 articles are the same as those shown for current articles.