CONTENTS

SUSAN BROWN MASTERS, T. KENDALL HARDEN, AND JOAN HELLER BROWN. Relationships between Phosphoinositide and Calcium Responses to Muscarinic Agonists in Astrocytoma Cells ............................................. +149

MICHAEL MCKINNEY, SCOTT STENSTROM, AND ELLIOTT RICHELSON. Muscarinic Responses and Binding in a Murine Neuroblastoma Clone (N1E-115): Selective Loss with Subculturing of the Low-Affinity Agonist Site Mediating Cyclic GMP Formation ...... 156

GARY R. LUTHIN AND BARRY B. WOLFE. [3H]Pirenzepine and [3H]Quinuclidinyl Benzilate Binding to Brain Muscarinic Cholinergic Receptors: Differences in Measured Receptor Density Are Not Explained by Differences in Receptor Isomerization ........ 164

BJÖRN RINGDAHL, BAHRAM RESUL, FREDERICK J. EHLERT, DONALD J. JENDEN, AND RICHARD DAHLBOM. The Conversion of 2-Chloroalkylamine Analogues of Oxotremorine to Aziridinium Ions and Their Interactions with Muscarinic Receptors in the Guinea Pig Ileum .................................................. 170

JOËL BOCKAERT, BERNARD CANTAU, AND MICHELLE SERBEN-PEREZ. Hormonal Inhibition of Adenylate Cyclase: A Crucial Role for Mg2+ .................................................... +180


J. CRAIG VENTER, PETER HORNE, BARBARA EDDY, ROGER GREGUSKI, AND CLAIRE M. FRASER. Alpha1-Adrenergic Receptor Structure ............................................. 196

TERRY G. ZAREMBA AND PETER H. FISHMAN. Desensitization of Catecholamine-Stimulated Adenylate Cyclase and Down-Regulation of Beta-Adrenergic Receptors in Rat Glioma C6 Cells: Role of Cyclic AMP and Protein Synthesis ........................................ 206

KEITH A. WREGGITT AND ANDRÉ DE LÉAN. The Ternary Complex Model: Its Properties and Application to Ligand Interactions with the D2-Dopamine Receptor of the Anterior Pituitary Gland .................................................................... 214

ROSARIO R. TRIFILETTI, MATHEW M. S. LO, AND SOLOMON H. SNYDER. Kinetic Differences between Type I and Type II Benzodiazepine Receptors ........................................... 228

GILLES GUILLON, DANIEL BUTLEN, AND RABARY RAJERISON. Evidence for Two Molecular Forms of Solubilized Vasopressin Receptors in Rat Kidney Membranes: Regulation by Guanyl Nucleotides ........................................... 241

J. C. BEAUJOUAN, Y. TORRENS, A. VIGER, AND J. GLOWINSKI. A New Type of Tachykinin Binding Site in the Rat Brain Characterized by Specific Binding of a Labeled Eledoisin Derivative ......................... 248

TAM THANH QUACH, FAI TANG, HIROYASU KAGEYAMA, ITALO MOCCHETTI, ALESSANDRO GUIDOTTI, JAMES L. MEEK, ERMINIO COSTA, AND JOAN P. SCHWARTZ. Enkephalin Biosynthesis in Adrenal Medulla: Modulation of Proenkephalin mRNA Content of Cultured Chromaffin Cells by 8-Bromo-Adenosine 3',5'-Monophosphate ........... 255

JAMES W. PUTNEY, JR., JERRY S. MCKINNEY, DEBRA L. AUB, AND BARBARA A. LESLIE. Phorbol Ester-Induced Protein Secretion in Rat Parotid Gland: Relationship to the Role of Inositol Lipid Breakdown and Protein Kinase C Activation in Stimulus-Secretion Coupling ............................................................................ 261

CAROLINE S. PACE. Influence of a Tumor-Promoting Phorbol Ester on the Electrical Response of B-Cells to Glucose and Glyburide ......................................................... 267

Continued
CONTENTS (cont'd)

V. CRAIG JORDAN, MARA E. LIEBERMAN, ETHEL CORMIER, RICK KOCH, JEROME R. BAGLEY, AND PETER C. RENITZ. Structural Requirements for the Pharmacological Activity of Nonsteroidal Antiestrogens in Vitro ................. 272

V. CRAIG JORDAN AND MARA E. LIEBERMAN. Estrogen-Stimulated Prolactin Synthesis in Vitro: Classification of Agonist, Partial Agonist, and Antagonist Actions Based on Structure ............................................. 279

GERALD WOLBERG AND THOMAS P. ZIMMERMAN. Effects of Calmodulin Antagonists on Immune Mouse Lymphocytes ..................................................... 286

S. R. IKEDA, R. S. ARONSTAM, J. W. DALY, Y. ARACAVA, AND E. X. ALBUQUERQUE. Interactions of Bupivacaine with Ionic Channels of the Nicotinic Receptor: Electrophysiological and Biochemical Studies ...................................................... 293


ERIC C. KELUSKY AND IAN C. P. SMITH. The Influence of Local Anesthetics on Molecular Organization in Phosphatidylethanolamine Membranes ................................................... 314

SAIK URIEN, PASCALE RIANT, EDITH ALBENGRES, ROBERT BROUDE, AND JEAN-PAUL TILLEMENT. In Vitro Studies on the Distribution of Probucol among Human Plasma Lipoproteins ................................................................. 322

LAWRENCE J. MARNETT, PAUL H. SIEDLIK, RUDY C. OCHS, WILLIAM R. PAGELS, MUKUL DAS, KENNETH V. HONN, ROBERT H. WARNOCK, BETH E. TAINER, AND THOMAS E. ELING. Mechanism of the Stimulation of Prostaglandin H Synthase and Prostacyclin Synthase by the Antithrombotic and Antimetastatic Agent, Nafazatrom .................................................. 328

JAMES S. WOODS, DAVID L. EATON, AND CARL B. LUUKENS. Studies on Porphyrin Metabolism in the Kidney: Effects of Trace Metals and Glutathione on Renal Uroporphyrinogen Decarboxylase ..................................................... 336

G. J. MULDER, F. F. KADLUBAR, J. B. MAYS, AND J. A. HINSON. Reaction of Mutagenic Phenaceton Metabolites with Glutathione and DNA: Possible Implications for Toxicity ................................................................. 342

DANIEL R. DOERGE AND MICHAEL D. CORBETT. Hydroperoxyflavin-Mediated Oxidations of Organosulfur Compounds: Model Studies for the Flavin Monoxygenase ......................................................... 348

SHEILA COLLINS AND MICHAEL A. MARLETTA. Carcinogen-Binding Proteins: High-Affinity Binding Sites for Benzo[a]pyrene in Mouse Liver Distinct from the Ah Receptor ......................................................... 353

ORAZIO CANTONI, NELWYN T. CHRISTIE, ALLAN SWANN, DAVID B. DRATH, AND MAX COSTA. Mechanism of HgCl2 Cytotoxicity in Cultured Mammalian Cells ......................................................... 360

THOMAS H. ZYTKOVICZ AND CHARLES D. LIARAKOS. Factors Influencing the Covalent Binding of (±)-7β,8α-Dihydroxy-9α,10α-epoxy-7,8,9,10-tetrahydrobenzo[a]pyrene to Ribonucleic Acids ................................................................. 369

TOMOYUKI YOKOTA, KENJI KONNO, SHIRO SHIGETA, AND ERICK DE CLERCQ. Comparative Inhibition of DNA Polymerases from Varicella Zoster Virus (TK+ and TK-) Strains by (E)-5-(2-Bromovinyl)-2'-deoxyuridine 5'-Triphosphate ............................................. 376

ROBERT I. GLAZER AND MARIAN C. KNOVE. 1-β-D-Arabinosyl-5-azacytosine: Cytocidal Activity and Effects on the Synthesis and Methylation of DNA in Human Colon Carcinoma Cells ......................................................... 381

RICHARD M. FOX, EDITH H. TRIPP, AND IAN W. TAYLOR. Analytical DNA Flow Cytometric Analysis of Deoxyadenosine Toxicity in Cultured Human Leukemic Lymphoblasts ......................................................... 388