

CONTENTS OF VOLUME 186

No. 1, JULY 1973

| | |
|---|-----|
| Alcohol Withdrawal Reactions in Mice: Effects of Drugs That Modify Neurotransmission. DORA B. GOLDSTEIN..... | 1 |
| Diurnal Rhythm in Behavioral Effects of Methamphetamine, <i>p</i> -Chloromethamphetamine and Scopolamine. HUGH L. EVANS, WILLIAM B. GHISELLI AND ROBERT A. PATTON..... | 10 |
| Comparable Behavior Maintained under Fixed-Ratio and Second-Order Schedules of Food Presentation, Cocaine Injection or <i>d</i> -Amphetamine Injection in the Squirrel Monkey. STEVEN R. GOLDBERG..... | 18 |
| The Convulsant Potency of Lidocaine and Its N-Dealkylated Metabolites. JEFFREY BLUMER, JOHN M. STRONG AND ARTHUR J. ATKINSON, JR..... | 31 |
| The Assay of Diphenylhydantoin Effects on Growing Human Lymphocytes. ARCHIE A. MAC-KINNEY AND RAMLAL VYAS..... | 37 |
| Effect of Local Anesthetics on Pharmacologic Receptor Systems of Smooth Muscle. JEROME H. FLEISCH AND ELWOOD TITUS..... | 44 |
| The Effects of Verapamil on Metabolism and Contractility of the Toad Skeletal Muscle. DANTE J. CHIARANDINI AND P. J. BENTLEY..... | 52 |
| Influence of Cadmium Ions on the Transmembrane Potential and Contractility of Isolated Rabbit Left Atria. NOBORU TODA..... | 60 |
| The Biological Activity of the (15 <i>S</i>)-15-Methyl Analogs of Prostaglandins E ₂ and F _{2α} . JAMES R. WEEKS, DONALD W. DUCHARME, WAYNE E. MAGEE AND WILLIAM L. MILLER..... | 67 |
| Further Studies on the Increased Synthesis of Norepinephrine during Nerve Stimulation of Guinea-Pig Vas Deferens Preparation: Effect of Tyrosine and 6,7-Dimethyltetrahydropterin. G. CLOUTIER AND N. WEINER..... | 75 |
| Release of Enzymes from a Rat Liver Lysosome Fraction: Inhibition by Catecholamines and Cyclic 3',5'-Adenosine Monophosphate, Stimulation by Cholinergic Agents and Cyclic 3',5'-Guanosine Monophosphate. LOUIS J. IGNARRO, NATALIE KRASSIKOFF AND JOSEPH SLYWKA..... | 86 |
| Dissociation of <i>Alpha</i> Adrenergic Receptor Protection from Inhibition of ³ H-Phenoxybenzamine Binding in Vascular Tissue. MAN SEN YONG AND MARK NICKERSON..... | 100 |
| The Regulation of Pineal Serotonin by a <i>Beta</i> Adrenergic Receptor. MICHAEL BROWNSTEIN, RONALD HOLZ AND JULIUS AXELROD..... | 109 |
| The Disposition of Propranolol. III. Decreased Half-Life and Volume of Distribution as a Result of Plasma Binding in Man, Monkey, Dog and Rat. GWYN H. EVANS, ALAN S. NIES AND DAVID G. SHAND..... | 114 |
| Comparison of the <i>Beta</i> Receptor Blocking Properties of Two Analogs of Dichloroisoproterenol (DCI). BERNARD LEVY..... | 123 |
| The Selective <i>Beta</i> Receptor Blocking Properties of DL-1-(2-Acetyl-4- <i>n</i> -Butyramidophenoxy)-2-Hydroxy-3-Isopropylaminopropane HCl (M&B 17803-A) in the Anesthetized Dog. BERNARD LEVY..... | 134 |
| Dromotropic Effects of Optical Isomers of <i>Beta</i> Blockers on the Cross-Circulated Canine Atrioventricular Node Preparation. TOSHIHIKO IIJIMA, KEITARO HASHIMOTO, NORIO TAIRA AND KOROKU HASHIMOTO..... | 145 |
| Effects of Some Divalent Cations on Sympathetic Ganglion Function. SERGIO GUERRERO AND WILLIAM K. RIKER..... | 152 |
| Contributions of Host and Intestinal Microflora in the Metabolism of L-Dopa by the Rat. BARRY R. GOLDIN, MARK A. PEPPERCORN AND PETER GOLDMAN..... | 160 |
| Quantitative Determination of Diazepam in Blood by Radioimmunoassay. BERNARD PESKAR AND SYDNEY SPECTOR..... | 167 |
| Physiologic Disposition of Short Chain Aliphatic Hydroxamates in the Mouse. II. Absorption, Distribution, Metabolism and Excretion of 1- ¹⁴ C-Acetohydroxamic Acid. WILLIAM N. FISHBEIN, CHARLES L. STREETER AND JAMES DALY..... | 173 |
| CI-750, a Novel Antidiarrheal Agent. P. BASS, J. A. KENNEDY, J. N. WILEY, J. VILLARREAL AND D. E. BUTLER..... | 183 |

| | |
|--|-----|
| Effect of Alkalosis on Ouabain Toxicity in the Dog. DARIO GALMARINI, JUAN FEDERICO CAMPO-DONICO AND ROBERTO DANIEL WENK | 199 |
| Renal Site of Action of Su-15049, a Diuretic Agent. MICHAEL R. COHEN AND EDWARD J. CAFRUNY .. | 204 |

No. 2, AUGUST 1973

| | |
|---|-----|
| The Effect of 5,6-Dihydroxytryptamine on Uptake, Storage and Metabolism of 5-Hydroxytryptamine by Blood Platelets. M. DA PRADA, R. A. O'BRIEN, J. P. TRANZER AND A. PLETSCHER .. | 213 |
| Long-Lasting Supersensitivity after 6-Hydroxydopamine in the Submaxillary Gland of the Rat. CARLOS J. PEREC, FRANCISCO J. E. STEFANO AND MARÍA E. BARRIO RENDO | 220 |
| Estimation of <i>in Vivo</i> Dopamine-β-Hydroxylase Activity in Rat Brain. JON M. STOLK | 230 |
| Evaluation of Electrical Pulses and Elevated Levels of Potassium Ions as Stimulants of Adenosine 3',5'-Monophosphate (Cyclic AMP) Accumulation in Guinea-Pig Brain. JOHN ZANELLA, JR. AND THEODORE W. RALL | 241 |
| <i>In Vitro</i> Inhibitory Effects of Narcotic Analgesics and Other Psychotropic Drugs on the Active Uptake of Norepinephrine in Mouse Brain Tissue. F. J. CARMICHAEL AND Y. ISRAEL | 253 |
| Alteration of Analgesic Receptor-Antagonist Interaction Induced by Morphine. A. E. TAKEMORI, TETSUO OKA AND NAOKO NISHIYAMA | 261 |
| Self-Administration of Acetylsalicylic Acid and Combinations with Codeine and Caffeine in Rhesus Monkeys. FRIEDRICH HOFFMEISTER AND WOLFGANG WUTTKE | 266 |
| A Study of the Tranylcypromine-Meperidine Interaction: Effects of <i>p</i>-Chlorophenylalanine and <i>L</i>-5-Hydroxytryptophan. PETER K. GESSNER AND ALAN G. SOBLE | 276 |
| Mechanism of the Synergistic Lethality between Pentazocine and Vasopressin in the Rat. THANH THUY CHAU, WILLIAM L. DEWEY AND LOUIS S. HARRIS | 288 |
| Effects of Chlorpromazine and Haloperidol on the Disposition of Mescaline-14C in Mice. NANDKUMAR S. SHAH, K. R. SHAH, R. S. LAWRENCE AND A. E. NEELY | 297 |
| Metabolism and Anticonvulsant Properties of Primidone in the Rat. IRWIN P. BAUMEL, BRIAN B. GALLAGHER, JOSEPH DiMICCO AND HECTOR GOICO | 305 |
| A Comparison of the Anticonvulsant, Neurotoxic and Lethal Effects of Diphenylbarbituric Acid, Phenobarbital and Diphenylhydantoin in the Mouse. ARTHUR RAINES, JEANNE M. NINER AND DANIEL G. PACE | 315 |
| Metabolism of Nifumic Acid-14C: Absorption, Excretion and Biotransformation by Human and Dog. S. J. LAN, T. J. CHANDO, I. WELIKY AND E. C. SCHREIBER | 323 |
| Renal Interaction between Ethacrynic Acid and Mercurial Diuretics. V. NIGROVIC, D. A. KOECHEL AND E. J. CAFRUNY | 331 |
| Cardiovascular Effects of 2,5-Dimethoxy-4-Methylamphetamine (DOM, STP). H. C. CHENG, J. P. LONG, C. F. BARFKNECHT AND D. E. NICHOLS | 345 |
| Effects of Isoproterenol during Hemorrhagic Shock in the Rat. HOWARD WHIGHAM, MAX HARRY WEIL AND HERBERT SHUBIN | 355 |
| Effects of Ouabain on Canine Purkinje Fibers <i>in Situ</i> or Perfused with Blood. MICHAEL R. ROSEN AND HENRY GELBAND | 366 |
| Sites of Action of Lilly 18947 in Skeletal Muscle. G. SUAREZ-KURTZ AND F. J. R. PAUMGARTEN .. | 373 |

No. 3, SEPTEMBER 1973

| | |
|---|-----|
| Interaction of Indazole Analogs of Lucanthone and Hycanthone with Closed Circular Duplex Deoxyribonucleic Acid. M. J. WARING | 385 |
| Comparison of Hycanthone ("Etrenol"), Some Hycanthone Analogs, Myxin and 4-Nitroquinoline-1-Oxide as Frameshift Mutagens. PHILIP E. HARTMAN, HILLARD BERGER AND ZLATA HARTMAN | 390 |
| <i>In Vivo</i> Cytogenetic Evaluation of Chloroindazole Thioxanthene IA-4 (a Hycanthone Analog) and Niridazole in Rat Bone Marrow. FRANCES MORELAND SAURO AND SIDNEY GREEN | 399 |
| The Antischistosomal Activity of a Chloroindazole Analog of Hycanthone in Mice Infected with <i>Schistosoma mansoni</i>. ERNEST BUEDING, JEAN FISHER AND JOHN BRUCE | 402 |
| Effect of Hycanthone and of Two of Its Structural Analogs on Levels and Uptake of 5-Hydroxytryptamine in <i>Schistosoma mansoni</i>. TSUI-CHIN TSENG CHOU, JAMES L. BENNETT, CANDACE PERT AND ERNEST BUEDING | 408 |
| Effects of Hycanthone and Two of Its Chlorinated Analogs on Hepatic Microsomes. G. W. LUCIER, O. S. McDANIEL, J. R. BEND AND E. FAEDER | 416 |

CONTENTS

v

| | |
|--|-----|
| Transformation of Rauscher Virus-Infected Cell Cultures after Treatment with Hycanthone and Lucanthone. FRANK M. HETRICK AND WILLIAM L. KOS..... | 425 |
| Hycanthone-Induced Hepatic Changes in Mice Infected with <i>Schistosoma mansoni</i> . WOLFGANG H. HAESSE, DUANE L. SMITH AND ERNEST BUEDING..... | 430 |
| Hepatic Drug Metabolism and Protein Malnutrition. BARRY H. RUMACK, JORDAN HOLTZMAN AND H. PETER CHASE..... | 441 |
| The Disposition of Propranolol. IV. A Dominant Role for Tissue Uptake in the Dose-Dependent Extraction of Propranolol by the Perfused Rat Liver. G. H. EVANS, G. R. WILKINSON AND D. G. SHAND..... | 447 |
| Biliary Excretion of Cardiac Glycosides. JOHN Q. RUSSELL AND CURTIS D. KLAASSEN..... | 455 |
| Study of the Therapeutic and Toxic Effects of Ouabain by Simultaneous Observations on the Excised and Blood-Perfused Sinoatrial Node and Papillary Muscle Preparations and the <i>in Situ</i> Heart of Dogs. KOROKU HASHIMOTO, TOMOHIKO KIMURA AND KATSUMI KUBOTA..... | 463 |
| The Bronchodilator and Cardiac Stimulant Effects of Th1165a, Salbutamol and Isoproterenol. RALPH E. GILES, JOSEPH C. WILLIAMS AND MARTIN P. FINKEL..... | 472 |
| Xenobiotic Accumulation and Metabolism by Isolated Perfused Rabbit Lungs. T. C. ORTON M. W. ANDERSON, R. D. PICKETT, T. E. ELING AND J. R. FOUTS..... | 482 |
| Hypothermic Inhibition of 5-Hydroxytryptamine and Norepinephrine Uptake by Lung: Cellular Location of Amines After Uptake. Y. IWASAWA, C. N. GILLIS AND G. AGHAJANIAN..... | 498 |
| A Specific and Sensitive Enzymatic-Isotopic Microassay for Serotonin in Tissues. JUAN M. SAAVEDRA, MICHAEL BROWNSTEIN AND JULIUS AXELROD..... | 508 |
| Adrenergic-Adenosine 3',5'-Monophosphate Regulation of Serotonin N-Acetyltransferase Activity and the Temporal Relationship of Serotonin N-Acetyltransferase Activity to Synthesis of ³ H-N-Acetylserotonin and ³ H-Melatonin in the Cultured Rat Pineal Gland. DAVID C. KLEIN AND JOAN L. WELLER..... | 516 |
| "Trophic" Influence on the Sympathetic Nerves of the Vas Deferens and Seminal Vesicle of the Guinea Pig. ARUN R. WAKADE AND S. M. KIRPEKAR..... | 528 |
| The Role of Inorganic Ions in Ion Exchange Processes at the Cholinergic Receptor of Voluntary Muscle. DERMOT B. TAYLOR..... | 537 |
| Studies on the Loss of Acetylcholine Sensitivity in Ileal Muscle. PAUL D. JOINER..... | 552 |
| Blockade of Quinine-Induced Contracture and ⁴⁶ Ca Efflux by Procaine and Tetracaine in Frog Sartorius Muscle. G. SUAREZ-KURTZ AND F. J. R. PAUMGARTEN..... | 562 |
| Interference with Excitation by Some Guanidinium Compounds. PAULA B. GOLDBERG AND C. Y. KAO..... | 569 |
| Electrophysiology of Methyl Mercury Poisoning. G. G. SOMJEN, S. P. HERMAN AND R. KLEIN. 579 | |
| Differential Effects of Nephrotoxic Agents on Renal Organic Ion Transport and Metabolism. G. H. HIRSCH..... | 593 |
| Active Accumulation of ¹⁴ C-Salicylic Acid by Rat Kidney Cortex <i>in Vitro</i> . JAMES W. PUTNEY, JR. AND JOSEPH F. BORZELLECA..... | 600 |
| Comparative Study of the Action of Phenothiazine and <i>para</i> -Fluorobutyrophenone Derivatives on Rat Brain Membranes Using the Spin Label Technique. F. LETERRIER, F. RIEGER AND J. F. MARIAUD..... | 609 |
| Enhancement by 6-Hydroxydopamine of the Effects of Dopa upon the Motor Activity of Rats. R. I. SCHOENFELD AND N. J. URETSKY..... | 616 |
| Reduction in Brain γ -Aminobutyric Acid and in Barbital Narcosis During Ethanol Withdrawal. GIRISH J. PATEL AND HARBANS LAL..... | 625 |
| Dopaminergic Neurons: Similar Biochemical and Histochemical Effects of γ -Hydroxybutyrate and Acute Lesions of the Nigro-Neostriatal Pathway. JUDITH R. WALTERS, ROBERT H. ROTH AND GEORGE K. AGHAJANIAN..... | 630 |
| A Convenient and Sensitive <i>in Vitro</i> Radioassay of Hepatic Ethylmorphine N-Demethylase. JOHN A. THOMPSON AND JORDAN L. HOLTZMAN..... | 640 |
| Anti-Edema and Analgesic Properties of Δ^9 -Tetrahydrocannabinol (THC). R. D. SOFIA, S. D. NALEPA, J. J. HABAKAL AND H. B. VASSAR..... | 646 |
| The Effect of Steroid Metabolites on the Hematopoietic Stem Cell Pool. WILLIAM N. HAIT, DOV GORSHEIN, EMMANUEL C. BESA, JOANNE H. JEPSON AND FRANK H. GARDNER..... | 656 |
| Erratum..... | 662 |
| Index, Volume 186, July-September 1973..... | 663 |