

Contents

ANALGESIA AND DRUGS OF ABUSE

- Evaluation of Binding in a Transfected Cell Line Expressing a Peripheral Cannabinoid Receptor (CB2): Identification of Cannabinoid Receptor Subtype Selective Ligands** Vincent M. Showalter, David R. Compton, Billy R. Martin and Mary E. Abood 989
- Unexpected Antinociceptive Effect of the N-Oxide (RWJ 38705) of Tramadol Hydrochloride** Robert B. Raffa, Mark L. Haslego, Cynthia A. Maryanoff, Frank J. Villani, Ellen E. Codd, Charlene D. Connelly, Rebecca P. Martinez, James J. Schupsky, John A. Buben, Wu-Nan Wu, Adrienne N. Takacs and Linda A. McKown 1098
- Spinal Morphine/Clonidine Antinociceptive Synergism: Involvement of G Proteins and N-Type Voltage-Dependent Calcium Channels** Zhong you Wei, Farzana Karim and Sandra C. Roerig 1392

AUTONOMIC PHARMACOLOGY

- Buffers Differentially Alter the Binding of [³H]Rauwolscine and [³H]RX821002 to the *Alpha*-2 Adrenergic Receptor Subtypes** Jean D. Deupree, Kendra A. Hinton, D. Roselyn Cerutis and David B. Bylund 1215
- Alpha-2 Adrenoceptor Subtype Causing Nitric Oxide-Mediated Vascular Relaxation in Rats** Charles S Bockman, Isabel Gonzalez-Cabrera and Peter W. Abel 1235
- In Vivo Depletion of Free Thiols Does Not Account for Nitroglycerin-Induced Tolerance: A Thiol-Nitrate Interaction Hypothesis As an Alternative Explanation for Nitroglycerin Activity and Tolerance** Abdullah I. Haj-Yehia and Leslie Z. Benet 1296
- Differences in β_3 -Adrenergic Receptor Cardiovascular Regulation in Conscious Primates, Rats and Dogs** You-Tang Shen, Peter Cervoni, Thomas Claus and Stephen F. Vatner 1435

BEHAVIORAL PHARMACOLOGY

- In Vivo* Effects of the Simultaneous Blockade of Serotonin and Norepinephrine Transporters on Serotonergic Function. Microdialysis Studies** N. Bel and F. Artigas 1064
- Dopamine D₃ Receptor Agonists Partially Reproduce the Discriminative Stimulus Effects of Cocaine in Squirrel Monkeys** Roger D. Spealman 1128
- Effects of Methadone or Buprenorphine Maintenance on the Subjective and Reinforcing Effects of Intravenous Cocaine in Humans** Richard W. Foltin and Marian W. Fischman 1153
- Tolerance to the Anxiolytic Effects of the Triazolobenzodiazepines Triazolam and Alprazolam, as Measured by the Ingestion of a Hypertonic Sodium Chloride Solution in Rats** Edward J. Barbarito, Chyan E. Lau and John L. Falk 1201
- Effects of the Structurally Novel Opioid TAMO on Schedule-Controlled Behavior and Thermal Nociception in Rhesus Monkeys** Michael B. Gatch, S. Stevens Negus, Nancy K. Mello, Sydney Archer and Jean M. Bidlack 1282
- Dependence on Δ^9 -Tetrahydrocannabinol: Studies on Precipitated and Abrupt Withdrawal** Mario D. Aceto, Susan M. Scates, John A. Lowe and Billy R. Martin 1290
- LSD and the Phenethylamine Hallucinogen DOI are Potent Partial Agonists at 5-HT_{2A} Receptors on Interneurons in Rat Piriform Cortex** Gerard J. Marek and George K. Aghajanian 1373

Investigation of the Effects of Opiate Antagonists Infused into the Nucleus Accumbens on Feeding and Sucrose Drinking in Rats	Ann E. Kelley, Elizabeth P. Bless and Chad J. Swanson	1499
CARDIOVASCULAR PHARMACOLOGY		
Effects of a New Calcium Antagonist, CD-832, on Isoproterenol-Induced Myocardial Ischemia in Dogs with Partial Coronary Stenosis	Teisuke Takahashi, Kenzo Takahashi, Satomi Kishi-Tanikawa, Katsuharu Tsuchida, Hiroaki Araki and Shohei Higuchi	1028
Endopeptidase Inhibitors Decrease Myocardial Ischemia/Reperfusion Injury in an <i>in Vivo</i> Rabbit Model	John A. Schriefer, Ellen P. Broudy and Arnold H. Hassen	1034
Losartan Exerts Antiarrhythmic Activity Independent of Angiotensin II Receptor Blockade in Simulated Ventricular Ischemia and Reperfusion	George P. Thomas, Gregory R. Ferrier and Susan E. Howlett	1090
Significance of Endothelin_B Receptors for Myocardial Contractility and Myocardial Energy Metabolism	Martin E. Beyer, Günther Slesak and Hans Martin Hoffmeister	1228
Effects of Prolonged Blockade of the Renin Angiotensin System on Striated Muscle Microcirculation of Spontaneously Hypertensive Rats	Kathrin J. Scheidegger, Jeanette M. Wood, Helma van Essen and Harry A. J. Struijker-Boudier	1276
Inhibition of Vascular Smooth Muscle Cell Proliferation and Arterial Intimal Thickening by a Novel Antiproliferative Naphthopyran	Todd R. Wiernicki, James S. Bean, Colin Dell, Andrew Williams, Dan Wood, Raymond F. Kauffman and Jai Pal Singh	1452
CELLULAR AND MOLECULAR PHARMACOLOGY		
The Mitochondrial Permeability Transition: A New Pathophysiological Mechanism for Reye's Syndrome and Toxic Liver Injury	Lawrence C. Trost and John J. Lemasters	1000
Human <i>Delta</i> Opioid Receptor: Functional Studies on Stably Transfected Chinese Hamster Ovary Cells after Acute and Chronic Treatment with the Selective Nonpeptidic Agonist SNC-80	Ewa Malatynska, Yu Wang, Richard J. Knapp, Sue Waite, Silvia Calderon, Kenner Rice, Victor J. Hruby, Henry I. Yamamura and William R. Roeske	1083
Paraoxon: Cholinesterase-Independent Stimulation of Transmitter Release and Selective Block of Ligand-Gated Ion Channels in Cultured Hippocampal Neurons	Edson S. Rocha, Karen L. Swanson, Yasco Aracava, James E. Goolsby, Alfred Maelicke and Edson X. Albuquerque	1175
Labeling of A_{2A} Adenosine Receptors in Human Platelets by Use of the New Nonxanthine Antagonist Radioligand [³H]SCH 58261	Silvio Dionisotti, Silvia Ferrara, Cristina Molta, Cristina Zocchi and Ennio Ongini	1209
Diversity of Nicotinic Acetylcholine Receptors in Rat Brain. V. α-Bungarotoxin-Sensitive Nicotinic Receptors in Olfactory Bulb Neurons and Presynaptic Modulation of Glutamate Release	Manickavasagom Alkondon, Edson S. Rocha, Alfred Maelicke and Edson X. Albuquerque	1460
α-Conotoxin-ImI: A Competitive Antagonist at α-Bungarotoxin-Sensitive Neuronal Nicotinic Receptors in Hippocampal Neurons	Edna F. R. Pereira, M. Alkondon, J. Michael McIntosh and Edson X. Albuquerque	1472
<i>In Vitro</i> Down-regulation of Antigen-induced IL-5 Gene Expression and Protein Production by cAMP-Specific Phosphodiesterase Type 4 Inhibitor	Laure Foissier, Michel Lonchampt, Francis Cogé and Emmanuel Canet	1484
CHEMOTHERAPY/GENE THERAPY		
Molecular Design of Hybrid Tumor Necrosis Factor-α III: Polyethylene Glycol-Modified Tumor Necrosis Factor-α Has Markedly Enhanced Antitumor Potency due to Longer Plasma Half-life and Higher Tumor Accumulation	Y. Tsutsumi, T. Kihira, S. Tsunoda, H. Kanada, S. Nakagawa, Y. Kaneda, T. Kanamori and T. Mayumi	1006
Apoptosis and Transmethylation Metabolites in HL-60 Cells	Petter C. Endresen, Thrina Loennechen, Hanne Kildalsen and Jarle Aarbakke	1318
Methotrexate Dose-Escalation Studies in Transgenic Mice and Marrow Transplant Recipients Expressing Drug-Resistant Dihydrofolate Reductase Activity	Chad May, Rohaizah I. James, Roland Gunther and R. Scott McIvor	1444

DRUG METABOLISM AND DISPOSITION

Interindividual and Interspecies Variation in Hepatic Microsomal Epoxide Hydrolase Activity: Studies with *cis*-Stilbene Oxide, Carbamazepine 10,11-Epoxy and Naphthalene

Neil R. Kitteringham, Carl Davis, Natalie Howard, Munir Pirmohamed and B. Kevin Park 1018

Recirculatory Pharmacokinetic Models of Markers of Blood, Extracellular Fluid and Total Body Water Administered Concomitantly

Tom C. Krejcie, Thomas K. Henthorn, Claus U. Niemann, Cheri Klein, Dhanesh K. Gupta, W. Brooks Gentry, Colin A. Shanks and Michael J. Avram 1050

Pharmacogenetic Determination of the Effects of Codeine and Prediction of Drug Interactions

Yoseph Caraco, James Sheller and Alastair J. J. Wood 1165

Microsomal Cytochrome P450 Peroxygenase Metabolism of Arachidonic Acid in Guinea Pig Liver

Gordon P. McCallum, Alan C. Weedon, P. Krug and John R. Bend 1188

Cellular Uptake Mechanism for Oligonucleotides: Involvement of Endocytosis in the Uptake of Phosphodiester Oligonucleotides by a Human Colorectal Adenocarcinoma Cell Line, HCT-15

Daisuke Nakai, Takeshi Seita, Tetsuya Terasaki, Susumu Iwasa, Yoko Shoji, Yutaka Mizushima and Yuichi Sugiyama 1362

Peripubertal Androgen Imprinting of Rat Hepatic Cytochrome P450 2C11 and Steroid 5 α -Reductase: Pretranslational Regulation and Impact on Microsomal Drug Activation

Thomas K. H. Chang and Gail D. Bellward 1383

Pharmacokinetics of a Synthetic, Chemically Modified Hammerhead Ribozyme Against the Rat Cytochrome P-450 3A2 mRNA After Single Intravenous Injections

John P. Desjardins, Brian S. Sproat, Barbro Beijer, Martina Blaschke, Martin Dunkel, Wilhelm Gerdes, Janos Ludwig, Vivian Reither, Thomas Rupp and Patrick L. Iversen 1419

ENDOCRINE PHARMACOLOGY

Effects of Cocaine on Anterior Pituitary and Gonadal Hormones

Christian M. Heesch, Brian H. Negus, James E. Bost, Joseph H. Keffer, Richard W. Snyder II and Eric J. Eichhorn 1195

Effects of a Nonpeptide Endothelin-1 ET_A Antagonist on Neurovascular Function in Diabetic Rats: Interaction with the Renin-Angiotensin System

Norman E. Cameron and Mary A. Cotter 1262

GASTROINTESTINAL PHARMACOLOGY

ONO-1078 Antagonizes Diarrhea-Causing Changes in Ion Transport and Smooth Muscle Contraction Induced by Peptidoleukotrienes in Rat and Human Colon *In vitro*

Masayuki Tominaga, Hideaki Tsukada, Masaya Hosokawa, Hiroshi Nakamura, Takao Taniguchi, Shunji Ueda, Masahiko Sakai and Minoru Okuma 1058

IMMUNOPHARMACOLOGY

Is Inhibition of Oxygen Radical Production of Neutrophils by Sympathomimetics Mediated *via* Beta-2 Adrenoceptors?

Manfred Weiss, Elisabeth Marion Schneider, Jörg Tarnow, Sabine Mettler, Maria Krone, Andrea Teschemacher and Horst Lemoine 1105

Specific Serological Response by Active Immunization with GD3-Bearing Liposomes

O. Massó, S. F. Aliño, M. Lejarreta, F. Blasco and J. Piulats 1114

Gallium Arsenide Selectively Suppresses Antigen Processing by Splenic Macrophages for CD4⁺ T Cell Activation

Timothy A. Lewis, Albert E. Munson and Kathleen L. McCoy 1244

Characterization of the Ocular Antiallergic and Antihistaminic Effects of Olopatadine (AL-4943A), a Novel Drug for Treating Ocular Allergic Diseases

N. A. Sharif, S. X. Xu, S. T. Miller, D. A. Gamache and J. M. Yanni 1252

Suppression of Splenic Natural Killer Cell Activity in a Mouse Model for Binge Drinking. I. Direct Effects of Ethanol and Its Major Metabolites Are Not Primarily Responsible for Decreased Natural Killer Cell Activity

Wen-Jun Wu and Stephen B. Pruet 1325

Suppression of Splenic Natural Killer Cell Activity in a Mouse Model for Binge Drinking. II. Role of the Neuroendocrine System

Wen-Jun Wu and Stephen B. Pruet 1331

mtg
afp
1165

afp
1252

NEUROPHARMACOLOGY

Platelet 5-Hydroxytryptamine (5-HT) Transporter and 5-HT_{2A} Receptor Binding after Chronic Hypercorticoesteronemia, (±)-1-(2,5-Dimethoxy-4-iodophenyl)-2-aminopropane Administration or Neurotoxin-Induced Depletion of Central Nervous System 5-HT in the Rat	Michael J. Owens, Cynthia A. Ballenger, David L. Knight and Charles B. Nemeroff	1040
Effects of Benzodiazepine Agonist Exposure on Corticotropin-Releasing Factor Content and Hormonal Stress Responses: Divergent Responses in Male and Ovariectomized Female Rats	Marlene A. Wilson, Rosemary Biscardi, Misty D. Smith and Steven P. Wilson	1073
Characterization of Opioid Agonist Efficacy in a C₆ Glioma Cell Line Expressing the μ Opioid Receptor	P. J. Emmerson, M. J. Clark, A. Mansour, H. Akil, J. H. Woods and F. Medzihradsky	1121
Expression and Modulation of 5-_{1A} Receptors in P11 Cells	Julie G. Hensler, Lorena S. Cervera, Heather A. Miller and James Corbitt	1138
Modeling of the pH Dependence of the Binding of WIN 35,428 to the Dopamine Transporter in Rat Striatal Membranes: Is the Bioactive Form Positively Charged or Neutral?	Cen Xu and Maarten E. A. Reith	1340
Increased <i>In Vivo</i> Phosphorylation State of Neuromodulin and Synapsin I in Striatum from Rats Treated with Repeated Amphetamine	Shin-Ichi Iwata, G. H. Keikilani Hewlett, Sandra T. Ferrell, Andrew J. Czernik, Karina F. Meiri and Margaret E. Gnegy	1428
Characterization, Receptor Mapping and Blood-Brain Barrier Transcytosis of Antibodies to the Human Transferrin Receptor	Phillip M. Friden, Tracy S. Olson, Robert Obar, Lee R. Walus and Scott D. Putney	1491

PROSTAGLANDINS, LEUKOTRIENES AND OTHER EICOSANOIDS

Prostaglandin D₂ Inhibits Prostaglandin E₂-Induced Allodynia in Conscious Mice	Toshiaki Minami, Emiko Okuda-Ashitaka, Hidemaro Mori, Seiji Ito and Osamu Hayaishi	1146
---	--	------

PULMONARY PHARMACOLOGY

The Use of Nitric Oxide-Nucleophile Adducts as Biological Sources of Nitric Oxide: Effects on Airway Smooth Muscle	Akihito Hirasaki, Keith A. Jones, William J. Perkins and David O. Warner	1269
The <i>In Vivo</i> Pharmacology of CP-80,633, a Selective Inhibitor of Phosphodiesterase 4	Claudia R. Turner, Victoria L. Cohan, John B. Cheng, Henry J. Showell, Christopher J. Pazoles and John W. Watson	1349
<i>In Vitro</i> Pharmacology of the Novel Phosphodiesterase Type 4 Inhibitor, CP-80633	V. L. Cohan, H. J. Showell, D. A. Fisher, C. J. Pazoles, J. W. Watson, C. R. Turner and J. B. Cheng	1356
Cellular and Metabolic Basis of Clara Cell Tolerance to Multiple Doses of P450-Activated Cytotoxicants: I. Bronchiolar Epithelial Reorganization and Expression of Cytochrome P450 Monooxygenases in Mice Exposed to Multiple Doses of Naphthalene	Jeffrey Lakritz, Aimin Chang, Alison Weir, Susan Nishio, Dallas Hyde, Richard Philpot, Alan Buckpitt and Charles Plopper	1408

TOXICOLOGY

Extracellular Acidosis and Chloride Channel Inhibitors Act in the Late Phase of Cellular Injury to Prevent Death	Shayla L. Waters and Rick G. Schnellmann	1012
I. Single-Dose Hemodynamic Toxicity and Pharmacokinetics of a Partial Phosphorothioate Anti-HIV Oligonucleotide (AR177) After <i>i.v.</i> Infusion to Cynomolgus Monkeys	Thomas L. Wallace, Scott A. Bazemore, Douglas Kornbrust and Paul A. Cossum	1306
II. Repeat-Dose Toxicity and Pharmacokinetics of a Partial Phosphorothioate Anti-HIV Oligonucleotide (AR177) After Bolus <i>i.v.</i> Administration to Cynomolgus Monkeys	Thomas L. Wallace, Scott A. Bazemore, Douglas Kornbrust and Paul A. Cossum	1313

Index, Volume 278, July–September, 1996		1508
--	--	------