

Contents

ANALGESICS

- Antagonism of Nitrous Oxide Antinociception in the Rat Hot Plate Test by Site-Specific *Mu* and *Epsilon* Opioid Receptor Blockade** Bradley L. Hodges, Michael J. Gagnon, Thomas R. Gillespie, Jeffrey R. Breneisen, David F. O'Leary, Shuichi Hara and Raymond M. Quock 596
- Inhibitors of Nitric Oxide Synthesis Antagonize Nitrous Oxide Antinociception in Mice and Rats** Cara E. McDonald, Michael J. Gagnon, Elizabeth A. Ellenberger, Bradley L. Hodges, Jennifer K. Ream, Stuart A. Tousman and Raymond M. Quock 601
- Pharmacologic Evidence That Nitric Oxide Mediates the Antinociception Produced by Muscarinic Agonists in the Rostral Ventral Medulla of Rats** Edgar T. Iwamoto and Lisa Marion 699
- SNF9007: A Novel Analgesic that Acts Simultaneously at *Delta*₁, *Delta*₂, and *Mu* Opioid Receptors** Cynthia L. Williams, Gary C. Rosenfeld, Nachum Dafny, Su-Nan Fang, Victor J. Hruby, Gabriela Bowden, Cynthia A. Cullinan and Thomas F. Burks 750

AUTONOMIC PHARMACOLOGY

- Mechanism of Ergonovine-Induced Contraction in the Mesenteric Artery from Deoxycorticosterone Acetate-Salt Hypertensive Rat** Stephanie W. Watts and R. Clinton Webb 617
- Dissociation of the Positive Inotropic Effect of Methoxamine from the Hydrolysis of Phosphoinositide in Rabbit Ventricular Myocardium: A Comparison with the Effects of Phenylephrine and the Subtype of the *Alpha*-1 Adrenoceptor Involved** Huang-Tian Yang and Masao Endoh 732

BEHAVIORAL PHARMACOLOGY

- Cholecystokinin-Related Peptides, after Systemic or Central Administration, Prevent Carbon Monoxide-Induced Amnesia in Mice** Tangui Maurice, Masayuki Hiramatsu, Tsutomu Kameyama, Takaaki Hasegawa and Toshitaka Nabeshima 665
- Dexfenfluramine and Serotonin Neurotoxicity: Further Preclinical Evidence That Clinical Caution is Indicated** Una McCann, George Hatzidimitriou, Alison Ridenour, Carl Fischer, Jie Yuan, Jonathan Katz and George Ricaurte 792

CARDIOVASCULAR PHARMACOLOGY

- Effects of Adrenalectomy and Chemical Sympathectomy on Pressor and Tachycardic Responses to Diphenylethylamine** Yong-Xiang Wang and Catherine C. Y. Pang 463
- Interaction of Drug Metabolites with the Class I Antiarrhythmic Drug Receptor on Rat Cardiac Myocytes** Robert Sheldon, Ela Thakore, Leslie Wilson and Henry Duff 477
- Effects of Vasoactive Substances on the Pig Isolated Hepatic Lymph Vessels** Shinichi Hashimoto, Yasuaki Kawai and Toshio Ohhashi 482
- Different Types of Angiotensin II Receptor Antagonism Induced by BIBS 222 in the Rat Portal Vein and Rabbit Aorta; the Influence of Receptor Reserve** J. S. Zhang, J. C. A. Van Meel, M. Pfaffendorf and P. A. Van Zwieten 509
- S 12340: A Potent Inhibitor of the Oxidative Modification of Low-Density Lipoprotein *In Vitro* and *Ex Vivo* in WHHL Rabbits** Christine Breugnot, Sylvie Privat, Claude Guillonnet, Gilbert Regnier, François Bouzom, Jean-Paul Vilaine and Albert Lenaers 515



The Cardioprotective and Electrophysiological Effects of Cromakalim Are Attenuated by Meclofenamate through a Cyclooxygenase-Independent Mechanism	Gary J. Grover, Albert J. D'Alonzo, Paul G. Sleph, Steven Dzwonczyk, Thomas A. Hess and Raymond B. Darbenzio	536
Cardiac Electrophysiologic and Antiarrhythmic Actions of Two Long-Acting Spirobenzopyran Piperidine Class III Agents, L-702,958 and L-706,000 [MK-499]	Joseph J. Lynch, Jr., Audrey A. Wallace, Raymond F. Stupinski III, Elizabeth P. Baskin, Carolann M. Beare, Sandra D. Appleby, Joseph J. Salata, Nancy K. Jurkiewicz, Michael D. Sanguinetti, Robert B. Stein, John R. Gehret, Theresa Kothstein, David A. Claremon, Jason M. Elliott, John W. Butcher, David C. Remy and John J. Baldwin	541
Nephrosis Augments Contractile Response to Adrenoceptor Agonists by the Decrease in Release of Endothelium-Derived Relaxing Factor from the Endothelial Cells	Mikio Ito, Atsuhiko Naruse, Isao Yamamoto, Makoto Oguri, Yoshio Suzuki, Nobuhiro Satake and Shoji Shibata	589
Causes of Differential Cardiovascular Sensitivity to Cocaine I: Studies in Conscious Rats	Carrie A. Branch and Mark M. Knuepfer	675
Role of Platelet-Activating Factor (PAF) in Oxygen Radical-Induced Cardiac Dysfunction	Giuseppe Alloatti, Giuseppe Montrucchio and Giovanni Camussi	766
Binding of [³H]-2-Methylthio ADP to Rat Platelets—Effect of Clopidogrel and Ticlopidine	P. Savi, M.-Cl. Laplace, J. P. Maffrand and J. M. Herbert	772
Inotropic Effect of the Cardioprotective Agent 2,3-Butanedione Monoxime in Failing and Nonfailing Human Myocardium	Robert H. G. Schwinger, Michael Böhm, Andrea Koch, Ingo Morano, Johann C. Rüegg and Erland Erdmann	778
Platelets-Induced Stimulation of Endothelin-1 Production and Inhibition by Phosphoramidon	Toshiyoshi Umekawa, Yasuo Matsumura, Naomi Yoshimura, Satoshi Murata, Kimi Takada, Yaeko Tsukahara, Masanori Takaoka and Shiro Morimoto	860
CELLULAR AND MOLECULAR PHARMACOLOGY		
Dopamine Inhibits a Sustained Calcium Current through Activation of <i>Alpha</i> Adrenergic Receptors and a GTP-Binding Protein in Adult Rat Sympathetic Neurons	Luis G. Aguayo and Jim Grossie	503
Muscarinic Cholinergic Agonists Stimulate Arachidonic Acid Release from Mouse Striatal Neurons in Primary Culture	Martine Tencé, Jocelyne Cordier, Joel Premont and Jacques Glowinski	646
Dual Effect of Suramin on Calcium Fluxes Across Sarcoplasmic Reticulum Vesicle Membranes	Jeffrey T. Emmick, Sangyeol Kwon, Keshore R. Bidasee, Kurt T. Besch and Henry R. Besch, Jr.	717
Stimulation of Cl Conductance by Minoxidil Sulfate and K Conductance by Minoxidil in Eccrine Clear Cells	Minoru Ohtsuyama, Fusako Sato, Takashi Toyomoto and Kenzo Sato	823
CHEMOTHERAPY		
Malondialdehyde Dosimetry in Laser-Irradiated Tissues Sensitized by Hematoporphyrin Derivative	Caroline Perret, Marie-Thérèse Foultier, Véronique Vonarx-Coinsman, Olivier Quancard, Alain Combre and Thierry Patrice	787
DRUG METABOLISM AND DISPOSITION		
A Recirculatory Pharmacokinetic Model Describing the Circulatory Mixing, Tissue Distribution and Elimination of Antipyrine in Dogs	Tom C. Krejcie, Thomas K. Henthorn, Colin A. Shanks and Michael J. Avram	609
Arylamine N-Acetyltransferase Activity of the Human Placenta	Lidia O. Derewlany, Brenda Knie and Gideon Koren	756
Human Placental Transfer and Metabolism of <i>p</i>-Aminobenzoic Acid	Lidia O. Derewlany, Brenda Knie and Gideon Koren	761

<p>Synergistic Increases in Rat Hepatic Cytochrome P450s by Ethanol and Isopentanol</p>	<p>Claudine A. Louis, Sheryl G. Wood, Vsevolod Kostrubsky, Peter R. Sinclair and Jacqueline F. Sinclair</p>	<p>838</p>
<p>ENDOCRINE PHARMACOLOGY</p>		
<p>Novel Rapid- and Short-Acting Hypoglycemic Agent, a Calcium(2s)-2-benzyl-3-(cis-hexahydro-2-isoindolinylcarbonyl) Propionate (KAD-1229) That Acts on the Sulfonylurea Receptor. Comparison of Effects Between KAD-1229 and Gliclazide</p>	<p>Hideki Ohnota, Takashi Koizumi, Naoyuki Tsutsumi, Miho Kobayashi Shuki Inoue and Fumiyasu Sato</p>	<p>489</p>
<p>GASTROINTESTINAL PHARMACOLOGY</p>		
<p>Active Intestinal Secretion of the Fluoroquinolone Antibacterials Ciprofloxacin, Norfloxacin and Pefloxacin; a Common Secretory Pathway?</p>	<p>Nina M. Griffiths, Barry H. Hirst and Nicholas L. Simmons</p>	<p>496</p>
<p>Tonic Regulation of Mouse Ileal on Ion Transport by Nitric Oxide</p>	<p>R. K. Rao, P. J. M. Riviere, X. Pascaud, J. L. Junien and F. Porreca</p>	<p>626</p>
<p>High Lipophilicity Decreases Drug Transport Across Intestinal Epithelial Cells</p>	<p>Pierre Wils, Armelle Warnery, Veronique Phung-Ba, Sophie Legrain and Daniel Scherman</p>	<p>654</p>
<p>Pharmacological Profile of (R)-1-[2,3-Dihydro-1-(2'-methylphenacyl)-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl]-3-(3-methylphenyl)urea (YM022), a New Potent and Selective Gastrin/Cholecystokinin-B Receptor Antagonist, <i>in Vitro</i> and <i>in Vivo</i></p>	<p>Akito Nishida, Keiji Miyata, Rie Tsutsumi, Hidenobu Yuki, Shinobu Akuzawa, Ayumi Kobayashi, Takeshi Kamato, Hiroyuki Ito, Mayumi Yamano, Yoshinori Katuyama, Masato Satoh, Mitsuaki Ohta and Kazuo Honda</p>	<p>725</p>
<p>Sigma Receptor-Mediated Effects of a New Antiulcer Agent, KB-5492, on Experimental Gastric Mucosal Lesions and Gastric Alkaline Secretion in Rats</p>	<p>Hideaki Hara, Keiko Tanaka, Yoshimitsu Harada and Takayuki Sukamoto</p>	<p>799</p>
<p><i>In Vitro</i> and <i>In Vivo</i> Analysis of the Mechanism of Absorption Enhancement by Palmitoylcarnitine</p>	<p>Jerome H. Hochman, Joseph A. Fix and Edward L. LeCluyse</p>	<p>813</p>
<p>IMMUNOPHARMACOLOGY</p>		
<p>Stimulatory and Inhibitory Action of Nitric Oxide Donor Agents <i>vs.</i> Nitrovasodilators on Reactive Oxygen Production by Isolated Polymorphonuclear Leukocytes</p>	<p>Galen M. Pieper, Grace A. Clarke and Garrett J. Gross</p>	<p>451</p>
<p>Naltrexone Antagonizes the Analgesic and Immunosuppressive Effects of Morphine in Mice</p>	<p>Daniel J. J. Carr, Lisa R. Gerak and Charles P. France</p>	<p>694</p>
<p>NEUROPHARMACOLOGY</p>		
<p>Chronic Pharmacological Activities of the Novel Anxiolytic β-Carboline Abecarnil in Rats</p>	<p>Masaki Ozawa, Keiko Sugimachi, Yukie Nakada-Kometani, Tetsuo Akai and Motonori Yamaguchi</p>	<p>457</p>
<p>Behavior of Mesocortical Dopamine Terminals During Single and Repetitive Stimulation: Comparison with Nigrostriatal Neurons</p>	<p>Ernst Agneter, Irene S. Hoffmann, Ernst A. Singer and Luigi X. Cubeddu</p>	<p>470</p>
<p>Characterization of the Pharmacodynamics of Several Antiepileptic Drugs in a Direct Cortical Stimulation Model of Anticonvulsant Effect in the Rat</p>	<p>A. Hoogerkamp, P. W. Vis, M. Danhof and R. A. Voskuyl</p>	<p>521</p>
<p>Acute Administration of Neuroleptics Decreases Neurotensin Metabolism on Intact, Regional Rat Brain Slices</p>	<p>Christopher S. Konkoy, Stephen M. Waters and Thomas P. Davis</p>	<p>555</p>
<p>Characterization of a Novel and Potent Corticotropin-Releasing Factor Antagonist in Rats</p>	<p>Frédérique Menzaghi, Rebecca L. Howard, Stephen C. Heinrichs, Wylie Vale, Jean Rivier and George F. Koob</p>	<p>564</p>
<p>Many Agents That Antagonize the NMDA Receptor-Channel Complex <i>in Vivo</i> Also Cause Disturbances of Motor Coordination</p>	<p>Adrian J. Carter</p>	<p>573</p>

Delayed Decreases in Brain 5-Hydroxytryptamine_{2A/2C} Receptor Density and Function in Male Rat Progeny Following Prenatal Fluoxetine	Theresa M. Cabrera and George Battaglia	637
Withdrawal from Continuous or Intermittent Cocaine Administration: Changes in D₂ Receptor Function	G. R. King, E. H. Ellinwood Jr., C. Silvia, C. M. Joyner, Z. Xue, M. G. Caron and T. H. Lee	743
Induction of Neurotensin and c-fos mRNA in Distinct Subregions of Rat Neostriatum after Acute Methamphetamine: Comparison with Acute Haloperidol Effects	Kalpna M. Merchant, Glen R. Hanson and Daniel M. Dorsa	806
Binding Profile of a Selective Calcitonin Gene-Related Peptide Receptor Antagonist Ligand, [¹²⁵I-Tyr]hCGRP₈₋₃₇, in Rat Brain and Peripheral Tissues	D. van Rossum, D. P. Ménard, A. Fournier, S. St-Pierre and R. Quirion	846
Neuroprotective Effects of a Use-Dependent Blocker of Voltage-Dependent Sodium Channels, BW619C89, in Rat Middle Cerebral Artery Occlusion	Steven H. Graham, Jun Chen, Jingquan Lan, Michael J. Leach and Roger P. Simon	854
RENAL PHARMACOLOGY		
The Effects of N^G-Nitro-L-Arginine, a Nitric Oxide Synthase Inhibitor, on Norepinephrine Overflow and Antidiuresis Induced by Stimulation of Renal Nerves in Anesthetized Dogs	Yasuhiro Egi, Yasuo Matsumura, Satoshi Murata, Toshiyoshi Umekawa, Kazuhiro Hisaki, Masanori Takaoka and Shiro Morimoto	529
The Renal Basolateral Transport System for Organic Anions: Properties of the Regulation Mechanism	Helge Hohage, Marina Löhr, Ulrike Querl and Joachim Greven	659
Polysubstrates: Substances that Interact with Renal Contraluminal PAH, Sulfate, and NMeN Transport: Sulfamoyl-, Sulfonyleurea-, Thiazide- and Benzeneamino-Carboxylate (Nicotinate) Compounds	K. J. Ullrich, G. Fritzsich, G. Rumrich and C. David	685
Chlorotyrosine Exerts Renal Effects and Antagonizes Renal and Gastric Responses to Atrial Natriuretic Peptide	Q.-M. Chen, D. D. Smyth, J. K. McKenzie, G. B. Glavin, J. G. Gu, J. D. Geiger and F. S. LaBella	709
TOXICOLOGY		
Investigation of Methacrylonitrile Metabolism and the Metabolic Basis for the Differences in Its Toxicity in Rats and Mice	Burhan I. Ghanayem, Idalia M. Sanchez and Leo T. Burka	581
The Oral Iron Chelator, 1,2-Dimethyl-3-Hydroxypyrid-4-One Reduces Hepatic-Free Iron, Lipid Peroxidation and Fat Accumulation in Chronically Ethanol-Fed Rats	S. M. Hossein Sadrzadeh, Amin A. Nanji and Patricia L. Price	632
Cimetidine Prevents Alcoholic Hepatic Injury in the Intra-gastric Feeding Rat Model	Amin A. Nanji, Shuping Zhao, Shamsuddin Khwaja, S. M. Hossein Sadrzadeh and David J. Waxman	832
Elevated Susceptibility to 4-Ipomeanol Cytotoxicity in Immature Clara Cells of Neonatal Rabbits	C. G. Plopper, A. J. Weir, S. J. Nishio, A. Chang, M. Voit, R. M. Philpot and A. R. Buckpitt	867
Covalent Interactions of Reactive Naphthalene Metabolites with Proteins	Myung Cho, Christine Chichester, Dexter Morin, Charles Plopper and Alan Buckpitt	881
Erratum		889