VIDEO TRACKERS MEASURE ANIMAL ACTIVITY

Videomex-V tracks black or white images
Videomex-X tracks multiple colors
Can work as interfaces to IBM-PC computers

NEW!

NEW!

VIDEOMEX-V SOFTWARE FOR WATER MAZE
This software plots patterns of movement, measures distance traveled and time taken by the animal to reach the goal platform in a Water Maze.

WATER STUDIES
The Videomex-V is ideal for measuring fish activity. Observations can be done either from a top view, side view or both the side and top views of an aquarium. It can track a single fish or measure the general level of activity of a school of fish.

MULTIPLE ANIMALS IN MULTIPLE CAGES
Now multiple animals in multiple cages can be measured according to patterns of movement, distances traveled and time each animal spends in each zone of their own cage. Each animal cage can be partitioned into multiple zones. This is a very economical solution for multiple cage studies.

BACKGROUND MASKING & SMALL OBJECTS FILTER
The Videomex-V provides the perfect method to measure primate activity behind cage bars by being able to "mask out" areas not of interest to the study. The Videomex-V tracks the animal and measures distance traveled even with solid cage bars between the animal and television camera. New! Small objects can be eliminated making Videomex-V insensitive to animal feces, tracking only the largest object in the field.

VIDEOMEX-X MULTI-COLOR SYSTEM
The Videomex-X Multi-Color System can track up to 6 separate color markers on either animals or humans. It digitizes the image and calculates the X-Y coordinates of color marked objects 60 times per second and transfers the data in real time to an IBM-PC/AT's hard disk. It's ideal for tracking multiple animal activity when animals share the same space. Software is available for tracking patterns of movement, social contact, distance traveled, time spent in different zones, etc. One exceptional application for this is in human biomechanics.

LAB ANIMAL RESEARCH EQUIPMENT CATALOG NOW AVAILABLE.
PLEASE CONTACT US FOR MORE INFORMATION AT:

COLUMBUS INSTRUMENTS INTERNATIONAL CORPORATION
P.O. Box 44049 Columbus, Ohio 43204 USA
PH: (614) 276-0861 FAX: (614) 276-0529 TLX: 246514 Toll Free In USA: 1-800-669-5011
The Editor of The Journal of Pharmacology and Experimental Therapeutics wishes to express appreciation to the following colleagues who acted as Guest Editors for Specific Fields in 1992.

- Martin W. Adler
- Edson X. Albuquerque
- Lewis Aronow
- Carl K. Buckner
- Marie Francoise Chesselet
- Theodore J. Cicero
- David E. Clarke
- Marlene L. Cohen
- Max Costa
- Charles R. Craig
- Stephen K. Fisher
- Alan Frazer
- Ray W. Fuller
- Gerald L. Gebber
- Stephen G. Holtzman
- E. H. Jeffrey
- Kenneth Johnson
- Rudolph L. Juliano
- David D. Ku
- John S. Lazo
- Irwin Lucki
- Donald E. McMillan
- Lawrence Middaugh
- William H. Morse
- David L. Nelson
- Saul M. Schanberg
- Kenneth J. Simansky
- Roger D. Spealman
- Jack W. Strandhoy
- Boris Tabakoff
- R. Clinton Webb
- Michael Williams

Additionally, sincere thanks are due to 1060 of our colleagues not on the Editorial Advisory Board who reviewed articles for the Journal in 1992. Their contributions are acknowledged individually in the Annual Report of The Journal to The Board of Publications Trustees of The American Society for Pharmacology and Experimental Therapeutics.
INDEX

Volume 265, April-June, 1993

A231877, endothelium-dependent relaxation of aorta, L- and D-enantiomers, N"-nitro-arginine (rats), 112
Abe, Y., Kitada, Y. and Narimatsu, A.: Effect of MCI-154, a cardiotonic agent, on regional contractile function and myocardial oxygen consumption in the presence and absence of coronary artery stenosis in dogs, 819
Abreu, M. E., see Clissold, D. B., 876
Abreu, M. E., see Karbon, E. W., 866
Absence, precipitated chronic diazepam (dogs), 1152
concentration-response curves, opiate-dependent ileum (guinea pigs), 1519
Acetylcholine cholinergic interaction, alpha-2 adrenoceptor-mediated antinociception (sheep), 536
effects of lemaklam, comparison of vasodilators (dogs), 1026
endothelium-dependent relaxation of aorta, L- and D-enantiomers, N"-nitro-arginine (rats), 112
extracellular increased levels, sigma ligands in frontal cortex (rats), 851
mopoblastic 1,2,3,4-tetrahydro-9-aminoacridine, striatum (rats), 759
pharmacological characterization, renovascular P2 purinergic receptors (rats), 334
receptors and nicotinic binding sites, neuroblastoma clone line (humans), 294
responses of circular myometrium, progesterone and mifepristone, oxytocin (rats), 1205
N-Acetyllysteine, inhibition of angiotensin converting enzyme (rats), 1239
N-Acetyl 5-endorphin(1-31), substance P and, supraspinal antinoickeption, mu opioid and alpha-2 adrenoceptors (mice), 835
N-Acetyl-neurotensin(8-13), inhibition of vascular leakage, tissue injury (rats), 619
Acetylsalicylic acid, airway smooth muscle function during development, Bay K 8644 and CGP 28392 (guinea pigs), 524
Acid, secretion reduction by L-365,260, prevention of gastrointestinal damage, aspirin/ethanol/cysteamine (rats), 1348
Acisida, extracellular, cell death, renal proximal tubules (rabbits), 1355
Action potential, duration, minoxidil sulfate-induced shortening, ionic mechanisms in myocytes (guinea pigs), 1527
Aciylicarnitines, long-chain, permeability and morphology, colonic mucosa (rats), 953
AD-5423, haloperidol and, pharmacological activities, antipsychotic efficacy and/or adverse side effects (rats), 745
Adenine, pharmacological characterization of N-0840, 227
Adenosine agonists, ventilation effects (monkeys), 971
A1-selective agonist RG14202 (pigs), 699 effects of lemaklam, comparison of vasodilators (dogs), 1026
metabolite, inhibition, proliferation of nontransformed cells (mice), 790
Adenosine triphosphatase, inhibitors, inhibition of relaxation, nitroglycerin and atrial natriuretic factor (rabbits), 1187
Adenosine triphosphate P2 purinergic receptors human breast tumor cells, 1499 pharmacological characterization, renoveseculture (rats), 334
-sensitive potassium channel action potential durations, minoxidil sulfate-induced shortening (guinea pigs), 1527
blocker glyburide, natriuretic properties (rats), 933
cardioprotection with zofenopril, myocardial ischemia (rats), 609
no abolishment of preconditioning, ischemic heart (rats), 559
relaxation of coronary arteries, calctonic gene-related peptide (pigs), 490
Adenylate cyclase, short-term desensitization, muncaricin m2 receptors, cerebellar granule cells (rats), 433
Adipocytes, lipolytic responses, desensitization, beta-1 and beta-2 adrenoceptors (hamsters), 237
Adrenal gland, pharmacological characterization, SR 47436 (dogs, monkeys), 826
Adrenoceptors alpha, functional characterization, intra-renal arteries (rabbits), 807
alpha-1, pharmacology of XB513 (rats), 1088
alpha-2 cholinergic interaction, antinociception (sheep), 536
cross-tolerance with mu opioid receptors, spinal cord (rats), 551
supraspinal antinoickeption, N-acetyl 5-endorphin(1-31) and substance P (mice), 835
beta blocker tertatolol (rats), 739
dosing rate-dependent relationship, propranolol plasma concentration (humans), 681
immunomodulatory effects, morphine (rats), 1079
inotropic and beta blocking effects, chimeric molecule (dogs), 1105
beta-1, mechanism of action, denopamine (rabbits), 1292
beta-1 and beta-2, desensitization, lipolytic responses of adipocytes (hamsters), 237
beta-2, independent relaxation in aorta, tyramine (rats), 1096
beta prejunctional, modulation of sympathetic neurotransmission, mesentery (rats), 657
comparison of vasodilators, lemaklam (dogs), 1026
contractile responses in vas deferens, atrial natriuretic peptide, inhibition of purinergic component (guinea pigs), 920
pharmacokinetics and pharmacodynamics, normal children and adolescents, 1232
Adrenochrome, implication of oxygen radicals, metabolism of cyclosporine A and FK-506, liver microsomes (rats, humans), 1047
Aging, stereoselective pharmacokinetics and pharmacodynamics, verapamil (humans), 690
AIDS, gastrointestinal and hepatic first-pass elimination, 2',3'-dideoxynoi- sine (rats), 731
Airway, smooth muscle, functional role, phosphodiesterase isozymes (humans), 1213
Akaibe, A., see Tamura, Y., 1017
Albuquerque, E. X., see Alkondon, M., 1455
Albuquerque, E. X., see Pereira, E. F. R., 1474
Albuquerque, M. L., see Kurth, C. D., 587
Aldershville, J., see Boesgaard, S., 1239
Aldrich, P. E., see Wong, P. C., 1088
Alhaider, A. A. and Wilcox, G. L.: Differential roles of 5-hydroxytryptamine, and 5-hydroxytryptamine, receptor subtypes in modulating spinal nociceptive transmission in mice, 378
Alkondon, M. and Albuquerque, E. X.: Diversity of nicotinic acetylcholine receptors in rat hippocampal neurons. I. Pharmacological and functional evidence for distinct structural subtypes, 1455
Amidase, catalyzed hydrolysis, stereoselectivity in glutathione conjugation, 2-
bromoisovalerylurea enantiomers (rats), 1406
Amiloride
its derivatives and, modulation, cardiac performance (rats), 1286
sensitivity, indomethacin and desaminob-8-D-arginine vasopressin-induced lithium reabsorption (humans), 1267
2-Amino-1, 4-dihydro -4-(2-4-[4-(2-methoxyphenyl)-1-piperazinyl]butylsulfanyl-phenyl)-6-methyl-5-nitro-3-pyridine carboxylic acid benzyl ester, see XB613
Amino acids
excitatory
activation of nociceptive reflexes, peripheral kainate receptors (rats), 927
modulation of seizure threshold, antiepileptic drugs and chemosensuants (mice), 1063
substance P, modulation of kainic acid-induced activity in spinal cord (mice), 159
release during ischemia and neuronal injury, effects of S-312-d, stroke-prone SHR rats, 463
1-Aminobenzotriazole, N-aralkyl derivatives, inhibition, pulmonary cytochrome P450 (rabbit), 281
γ-Aminobutyric acid, -induced depressions of cerebellar Purkinje neurons, sensitization by ethanol, β-adrenergic mechanisms in brain (rats), 426
2-Aminochromomes, block of platelet aggregation, inhibition of cAMP-dependant phosphodiesterase (humans), 457
1-Aminocyclopentanecarboxylic acid, chronic treatment, adaptive changes, NMDA receptor complex (mice), 1380
Aminoglutethimide, induction of cytochrome P450 ZBI, liver (rats), 477
Amlodipine, action on subcutaneous resistance arterries (humans), 860
Amphetamine, -like discriminative stimulus effects, stereoisomers of deprenyl (rats), 1
Analgiesia
medullary hyperalgesic center, pharmacological characteristics (rats), 266
opioid receptor regulation (mice), 314
supraspinal mu systems, independent expression, genetically different mouse strains, 166
Anatoxin-a
agonist site, nicotinic acetylcholine receptors, hippocampal neurons (rats), 1474
diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1455
Anday, E., see Kurth, C. D., 587
Anderson, B., see Rampe, D. Jr., 1125
Anderson, D. K., see Shaffer, J. E., 1105
Anesthesia, trichloroethanol potentiation, 5-HT, receptor-mediated ion current, nodose ganglion neurons (rats), 771
Anesthetics
barbiturate, depression of resting K+ conductance, myocardin (frog), 358
inhalational, neurochemical actions, GA
Barbiturate complex (mice), 1392
isoflurane, attenuation of Ca++ mobilization, vascular smooth muscle cells, 74
Angiotensin
neuromodulatory effects, angiotensin receptors, vas defeners (rabbits), 601
peptides, prostaglandin synthesis, aortic smooth muscle cells (pigs), 664
Angiotensin converting enzyme inhibition by N-acetylcysteine (rats), 1239
inhibitor quinapril, vasoconstrictor activity, mesenteric vasculature (rats), 187
Angiotensin II
nonpeptide antagonist losartan, intrinsic properties, glomeruli and mesangial cells (rats), 1534
prevention of salt-induced hypertension, losartan, reduced renal mass rats, 1131
receptor antagonist SR 47436, pharmacological characterization (rats, dogs, monkeys), 826
vasoconstrictor activity in mesenteric vasculature, quinapril (rats), 187
Anions
organic, kinetic analysis of hepaticbiliary transport, Eisai hyperbilirubinemic mutant rats, 1301
secretion, Purkinje receptors, human breast tumor cells, 1499
Antidrugs, metabolic activation of flutamide, cytochromes P-450 (rats, humans), 366
Antiarhythmic agents, L-691,121, novel class III agent (guine pigs), 720
Antibody, -forming cell response, gallium arsenide-induced suppression, reversal by vehicle supernatants (mice), 144, 150
Anticholinesterase, neostigmine, mechanism of bradycardia (cats), 194
Antiepileptic agents, modulation of seizure threshold, excitatory amino acids (mice), 1063
Antihypertensive agents, methylated derivatives, phenyl-2-aminooethy sulfide (rats), 1113
Antimycin A, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
Antinociception
alpha-2 adrenoceptor-mediated, cholinergic interaction (sheep), 536
cannabinoid-induced, blockade by norbinaltorphimine (mice), 633
cross-tolerance of mu opioid and alpha-2 adrenergic receptors, spinal cord (rats), 551
morphine-induced, antagonism, intracerebroventricular administration of pentobarbital (mice), 1381
nicotinic, adrenergic, serotoninergic and cholinergic components (rats), 777
opioid-induced, role of neurotensin, peri-aqueductal gray (rats), 580
profile of biphain (mice), 1446
supraspinal, N-acetyl β-endorphin-(1-31), substance F (mice), 835
Antipsychotic agents
acute haloperidol administration, enhanced dopaminergic transmission (rats), 1193
AD-5423 and haloperidol, pharmacological activities (rats), 745
dopamine D1/D3, and 5-HT1a receptor occupation (rats), 498
NPC 16377, behavioral and neuroproective profile (rats, mice, gerbils), 876
Antisense oligodeoxynucleotides, muscle nicrin m2 receptors, short-term desensitization, cerebellar granule cells (rats), 433
Antonacci, M. J., see Sargent, C. A., 609
Aorta
cromakalim-induced 45Rb efflux, inhibition by 8-(diethylamino)-octyl-3,4,5-trimethoxybenzoate (rats), 1399
discrimination of Aα adenosine receptors, 2-phenylethoxy-9-methyladenine (guineas pigs), 245
deroendothelium-dependent relaxation, L- and D-enantiomers, N2-nitro-argi-nine (rats), 112
N-0681 and its enantiomers (guinea pigs), 201
pharmacological characterization, SR 47436 (rats, dogs, monkeys), 826
sarcoplasmic reticulum Ca++ pump ATPase inhibitors, inhibition of relaxation, nitroglycerin and atrial natriuretic factor (rabbits), 1187
smooth muscle, prostaglandin synthesis, angiotensin peptides (pigs), 664
Apotitosis, morphine-like alterations, thymocyte subpopulations (mice), 81
Appalaamy, M., see Tseng, C.-J., 1511
Appleby, S. D., see Lynch, J. J., Jr., 720
Appleyard, S. M., see Horan, P. J., 1446
Aprikalin, A1-selective agonist RG14202 (pigs), 699
N-Aralyl-1-aminobenzotriazole, inhibition of pulmonary cytochrome P450 (rabbits), 281
Ardaillou, R., see Chansel, D., 1534
Arecoline, diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1455
Arthrogenia, region-dependent damage to central nervous system, levels above brain stem, 3,3'-imidindipropionitrile (rats), 1492
Aromatase, inhibitor aminogluthimide, induction of cytochrome P450 2BI (rats), 477
Arsenic, sera of gallium arsenide-exposed mice, inhibition of bacterial growth, increased host resistance, 795
Arterioles, cerebral, constriction, cocaine and its metabolites (piglets), 587
Artery
antiproliferative and endothelium-dependent vasodilator properties, 1,3-dihydro-3-p-chloro-phenyl-7-hydroxy-6-methyl-furo-(3,4c)pyridine dichloridate (rats), 30
cerebral, role of nitric oxide, neurogenic vasodilation (pig), 339
coronary
A1-selective agonist RG14202 (pigs), 699
comparison of vasodilators, lemakalin (dogs), 1026
epinine in tissues (human), 346
regional contractile function, effects of MCI-154 (dogs), 819
relaxation, calcitonin gene-related peptide (pigs), 490
intrarenal, functional characterization, alpha adrenoceptors (rabbits), 807
large vs. small, sympathetic vasomotor control, postfunctional role of neu-ropetide Y (rabbits), 887
pulmonary
endothelial cells, mechanism of putrescine transport (human), 60
epine in tissues (human), 346
subcutaneous resistance, action of amlo-
dipine (rabbit), 860
vascular postanaptic neuropetide Y rece-
ptor function (rats), 172
4-(2-Arylthienyl)phenol, 2,6-disubstituted,
prodrug, orally active 5-lipoxygenase
inhibitor (monkeys), 483
2-Aryl-3-indolactamide, imidazopyridine
derivatives and, mitochondrial diaze-
pam binding inhibitor receptors (r
ats), 649
Aspirin, prevention of gastrointestinal dam-
age by L-365,260 (rats), 1348
Astrocytes, region-dependent damage to
central nervous system, levels above
brain stem, 3,5-iodonitropropionitrile (rats),
1492
Atenolol, immunomodulatory effects of
morphine, beta adrenergic receptor
(rats), 1079
Atracurium, speed of action, neuromuscular
junction blocking vs. buffering hy-
pothesis, 1181
Atria, N^4-endorbornan-2-yl-methyl-
adenine and its enantiomers (guinea
pigs), 201
Atrial natriuretic factor, inhibition of relax-
ation, sarcoplasmic reticulum Ca^2+
pump ATPase inhibitors, aorta (rab-
bits), 1187
Atrial natriuretic peptide, inhibition of pur-
inergic component, electrically induced
ducted contractile responses, vas def-
erens (guinea pigs), 920
Atropine, -resistant motility, tachykinins,
colon (guinea pigs), 1224
Au, J. L. S., see Bramer, S. L., 731
Audia, J. E., see Nelson, D. L., 1272
Auerbach, S. B., see Rutter, J. J., 1319
Ault, B. and Hildebrand, L. M.: Activation of
nociceptive reflexes by peripheral
kainate receptor agonists, 927
Autura, J., Romeo, E., Kozikowski, A., Ma, D.,
Costa, E. and Guidotti, A.: Participa-
tion of mitochondrial diaphragm binding
inhibitor receptors in the an-
ticonflict, antinociceptive and anti-
convulsant action of 2-aryl-3-indole-
actamide and imidazopyridine deri-
vatives, 649
Autoreceptors
\gamma-aminobutyric acid, cerebral cortex and
spinal cord, receptor subtypes (rats), 765
central 5-HT_1A and 5-HT_1B blocking
properties, penbutolol (rast), 707
-selective dopamine agonists, electrophy-
siological effects, A10 dopamine
nerve (rast), 963
Avidin, radiolabeled defereroxamine-biotin
derivatives, plasma stability and
pharmacokinetics, 408
Axon, giant structure-activity relationship,
D-ring derivatives of grayanotoxin (squid),
1328
Baba, N., see Yakehiro, M., 1328
Bachoo, M., see Barman, S. B., 194
Backman, S. B., Bachoo, M. and Polosa, C.: Mechanism of the bradycardia pro-
duced in the cat by the anticholinest-
erase neostigmine, 194
Baclofen, GABA autoreceptors, cerebral
cortex and spinal cord (rast), 765
Bacteria, inhibition of growth, gallium ar-
senide-exposed mice, arsenic in sera,
538
Badre, L., see Chansel, D., 1534
Bailey, M., see Karbon, E. W., 866
Bakshi, V. P. and Kelley, A. E.: Feeding
induced by opioid stimulation of the
ventral striatum: Role of opiate re-
ceptor subtypes, 1255
Baldwin, J. J., see Lynch, J. J., Jr., 720
Bals-Kubik, R., see Shippenberg, T. S., 53
Balster, R. L., see Clissold, D. B., 876
Banerjee, S. P., see Lidsky, T. I., 1193
Baraban, S. C., Stornetta, R. L. and Guye-
et, P. G.: Respiratory control of
sympathetic nerve activity during
nalone-preincubated morphine with-
drawal in rats, 89
Barbiturates
anesthetics, depression of resting K* con-
ductance, myocardium (frog), 358
pentobarbital dependence, behavioral effec-
ts, sedation, (47
Barker, J. L., see Valeyev, A. V., 985
Barrett, R. J., May, J. J., Martin, P. L. and
Miller, J. R.: In vitro and in vivo pharma-
ological characterization of N^4-cyclopropyl-9-methyladenine (N-
094): A selective, orally active A,
adenosine receptor antagonist, 527
Barthelemy, G., see Cazaubon, C., 826
Basil ganglia, somatostatin receptors in nu-
cleus accumbens, locomotor activity
(rast), 67
Bassie, A. S., see Yurdagyn, C., 565
Baskin, E. B., see Lynch, J. J., Jr., 720
Bay K 8644
airway smooth muscle function, develop-
ment (guinea pigs), 524
cardiovascular effects (guinea pigs), 1125
Beaudry, C., see Luguier, C., 1142
Beaune, P., see Barman, A., 366
Becker, A., see Tagari, P., 416
Becker, M. W., see Dorn, G. W., II, 447
Behavior
effects of sedative drugs, pentobarbital
dependence (baboons), 47
modification of effects, 4-propyl-9-hy-
droxynaphthoxazine, dopamine an-
tagonists (monkeys), 1039
motivational effects of opioids, neuro-
chemical substrates, mesolimbic dop-
amine system (rast), 53
pharmacology of NPC 17742 (mice), 1055
Belardelli, L., see Dennis, D. M., 543
Bend, J. R., see Mathews, J. M., 281
Benet, L., see Metz, D. M., 258
Benzodiazepines
acute and repeated lorazepam exposure,
Cambar, Cardiovascular, Catecholamines, Catalepsy, Cefodizime, activation-induced binding, port, nortinaltorphimine (rats), lanubin, tubules, myocytes, (guinea pigs), 36
Carbachol, decreased muscarinic m2 mRNA, cerebral granule cells (rats), 415
- induced sodium current, ventricular myocytes, guanine nucleotides (guinea pigs), 641
Carbonyl cyanide p-trifluoromethoxyphenylhydrazone, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
Cardiotonic agents, regional contractile function, myocardial oxygen consumption, MCI-154 (dogs), 819
Cardiovascular system, acute opioid dependence, spinal rat, 129
Catepsaya, haloperidol-induced, serotonergic involvement (rats), 207
Catecholamines, acute opioid dependence, cardiovascular system, spinal rat, 128
Caudatus, monoamine oxidase-A inhibitors, dopamine metabolism (rats), 103
CD25, altered expression, inhibition of T cell proliferation, galbin arsenide (mouse), 178
Cefozidine, kinetic analysis, hepatobiliary transport, Eisai hyperbilirubinemic mutant rats, 1301
Central nervous system, central mu opioid receptor-mediated changes, renal function (rats), 134
functional integrity, pressor and tachy-cardic effects, diphenylethionium (rats), 263
intestinal mobility and nociception, Phe-Leu-Phe-Gin-Pro-Arg-Phe-NH2 amide analogs (rats), 955 region-depended levels above brain stem, 3,3' - (imidopropionitrile) (rats), 1492
Cerebellar granule cells decreased muscarinic m2 mRNA, carbachol (rats), 441
short-term desensitization, muscarinic m2 receptors (rats), 443
Cerebral cortex, spinal cord and, GABA autoreceptors, receptor subtypes (rat), 765
Cesura, A. M., see Colzi, A., 103
C-fibers, activation of nociceptive reflexes, peripheral kainate receptors (rats), 927
CGP 28392, airway smooth muscle function, development (guinea pigs), 524
CGP 35348, GABA autoreceptors, cerebral cortex and spinal cord (rats), 765
CGS 21680, effects of adenosine agonists, ventilation (monkeys), 971
Chachaty, see Berson, A., 366
Chang, S. L., see Zadina, J. E., 254
Chansel, D., Badre, L., Czeksali, S., Vandeuvre, S., Cambra, J. and Ar-dailou, R.: Intrinsic properties of the nonpeptide angiotensin II antagonist losartan in glomeruli and mesangial cells at high concentrations, 1534
Chatterjee, D., see Han, Z., 790
Chaudhary, I. P., Tantutertudum, S., McNamara, P. J., Robertson, L. W. and Blouin, R. A.: Effect of genetic obesity and phenobarbital treatment on the hepatic conjugation pathways, 1333
Chemoconvulsants, modulation of seizure threshold, excitatory amino acids (mouse), 1063
Chemotolerance, thermal tolerance and, transeptal transport, renal epithelium (flounder), 992
Chemblo, S., see Varma, D. R., 1096
Chen, F.-Y. and Lee, T. J.-F.: Role of nitric oxide in neuronal vasodilation of porcine cerebral artery, 339
Chen, J., see Simon, R. P., 24
Chen, Y., see Pierce, G. N., 1280
Cherry, W. F., see Poluhijs, M., 1406
Chiba, S., see Furukawa, Y., 801
Chiu, A. T., see Wong, P. C., 1088
Chloral hydrate, 5-HT3 receptor-mediated ion current, trichlorehanol potentiation, nodose ganglion neurons (rats), 771
Chloride, modulators of electrolyte transport, secretion and somatostatin, gallbladder epithelium (guinea pigs), 273
Chloride current, GABA receptor-channel complex, characterization, brain (rata), 985
Chlorpromazine, behavioral effects, pentobarbital dependence (baboons), 47
Cholera toxin, differential properties of 5-HT1A receptors, dorsal raphe and hippocampus (rats), 106
Cholinergic agents, drugs of abuse and, delayed matching-to-sample responding (monkeys), 120
Christensen, S., see Boesgaard, S., 1239
Churchill, P. C. and Ellis, V. R.: Pharmacological characterization of the rennovascular P2 purinergic receptors, 334
Cicatine
acute vascular effects of thiazi diuretics, ion channel involvement (guinea pigs), 1175
antiproliferative and endothelium-dep
dependent vasodilator properties, 1,3-dihydroxy-3-p-chlorophenyl-7-hydroidoxy-6-methyl-furo-(3,4-c) pyridine hydrochloride (rat), 30
Cieslinski, L. B., see Torphy, T. J., 1213
Cisplatin, differential actions, renal proximal tubule, inner medullary collecting duct cells (rabbits), 1421
Claremon, D. A., see Lynch, J. J. Jr., 720
Clark, D., see Ackerman, J. M., 965
Clarke, D. E., see Hegde, S. S., 601
8-CI-cyclic AMP, inhibition by adenosine metabolite, proliferation of nontransformed cells, 790
Cl- HCO3, exchanger, inhibitor of, inhibition of gastric acid secretion (mouse), 1313
Clissold, D. B., Pontecorvo, M. J., Jones, B. E., Abreu, M. E., Karbon, E. W., Ericksson, R. H., Natalie, K. J. Jr., Bo
Clissold, D. B., see Karbon, E. W., 866
Clissold, D. B., see Willets, J., 1055
Clonidine, alpha-2 adrenoceptor-mediated antinociception, cholinergic interaction (sheep), 536
Cocaine, drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
intracranial self-administration, medial prefrontal cortex, dopamine turnover in nucleus accumbens (rats), 592
metabolites and, constriction of cerebral arterial (pigs), 587
Cohen, M. M., see Fulginiti, J., III, 1413
Colbert, J. C., see Pollock, S. H., 1113
Cole, W. C., see Pierce, G. N., 1280
Collecting ducts, inner medullary and renal proximal tubules, differential actions, cisplatin (rabbit), 1421
Collon, P., see Carpenè, C., 237
Colo
muscopera, permeability and morphology, long-chain acylcarnitines (rat), 955
reflexly evoked atropine-resistant motility, tachykinins (guinea pigs), 1224
Colussi, D. J., see Merkely, L. A., 699
Colzi, A., d'Agostini, F., Cesura, A. M., Borroni, E. and Da Prada, M.: Monoamine oxidase-A inhibitors and dopamine metabolism in rat caudatus: Evidence that an increased cytosolic level of dopamine displaces reversible monoamine oxidase-A inhibitors in vivo, 103
Compton, D. R., Rice, K. C., De Costa, B.
Index

Conotoxin, neuropeptide Y and pancreatic polypeptide, reduced calcium currents, dissociated neurons from superior cervical ganglia (rats), 903
Conte, B., see Pariani, M., 713
Contrera, J. G., McLeskey, S. W., Holopainen, I., Xu, J. and Wojcik, W. J.: Muscarinic m receptors in cerebellar granule cell cultures from rat: Mechanism of short-term desensitization, 433
Converting enzyme inhibitor, neutral endopeptidase inhibitor and, blood pressure and renal function, hypertension (rats), 1339
Coronary vessels, discrimination of A2 adenosine receptors, 2-phenethylthio-9-methyladenine (guinea pigs), 248
Costa, E., see Auta, J., 649
Coussons, M. E., see Lyse, D. T., 1071
Cox, E. B., see Merkel, L. A., 699
CP-55,940, cannabinoid structure-activity relationships, receptor binding, in vivo activities (rats), 218
CP-99,994, neurogenic vasodilation, neurokinin, tachykinin receptors, nasal mucosa (rats), 36
Crofton, K. M., see Llorens, J., 1492
Cromakalim
-Induced **Rb efflux, inhibition by 8-(diethylamino)-octyl-3,4,5-trimethoxybenzoate, aorta (rats), 1399
-relation of coronary arteries, calcitonin gene-related peptide (pigs), 490
Crotoxin, induction of tolerance (mice), 41
Cruciani, R. A., see Valevey, A. Y., 985
Cruz, S. L. and Villarreal, J. E.: Acute opioid dependence in the cardiovascular system of the spinal rat, 128
Cyclic AMP
-Dependent phosphodiesterase, block of platelet aggregation, 2-aminochromes (humans), 457
-modulators of electrolyte transport, secretion and somatostatin, gallbladder epithelium (guinea pigs), 273
-relaxation of coronary arteries, calcitonin gene-related peptide (pigs), 490
Cyclic GMP
Activated current block by pimozide, rod photoreceptors (frog), 627
**N-Cytocholin-9-methyladenine, pharmacological characterization, 227
Cyclosporine A
metabolism in liver microsomes, adrenochrome reaction, oxygen radicals (rats, humans), 1047
mitochondrial and glycolytic dysfunction, lethal injury to hepatocytes (rats), 392
CYP2D1, dose- and time-dependent changes, phenycyclidine metabolite covalent binding (rats), 1261
Cysteamine, prevention of gastrointestinal damage by L-365,260 (rats), 1348
Cytisine, diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1459
Cytocrome P450
-inhibition and induction of isoenzymes, lung (rats), 386
-metabolic activation of flutamide (rats, humans), 366
-pulmonary, inhibition, N-aralkyl derivatives of 1-aminobenzotriazole (rabbits), 281
-role of CYP3D1, phenycyclidine metabolite covalent binding, dose- and time-dependent changes (rats), 1261
-Cytocrome P450 1A1, 1A2 and, specificity, substrate and inhibitor probes (humans), 401
-Cytocrome P450 2B1, induction by amilorin and hypertension (dogs), 477
Cytosol, monoamine oxidase-A inhibitors, dopamine metabolism, caudatus (rats), 103
Cytotoxin, tirapazamine, pharmacokinetics, bioreductive metabolism (mice), 938
Czekalski, S., see Chanael, D., 1534
Dage, R. C., see Rampe, D., 1125
d'Agostini, F., see Colzi, A., 103
-DAMGO, induction of feeding, opioid stimulation, ventral striatum (rats), 1253
Da Prada, M., see Colzi, A., 103
Dauxata, M., see Carpené, C., 237
Davis, T. P., see Horan, P. J., 896, 1446
De Blasi, A., see Prisco, S., 739
De Costa, B. R., see Compton, D. R., 218
Deferoxamine, -binon derivatives, radiola-belling, plasma and pharmacokinetics, 408
-de Groot, W. C., see Yoshiyama, M., 844
Delansorne, R., see El Alj, A., 1205
de la Roza, G., see Okamoto, M., 41
(d-Ala2, Glu)2Tetroporphin, [Cys3]- and [Ser2]-substituted derivatives, opioid delta receptor multiplicity (mice), 896
Del Valle, J., see Wagner, L., 308
De Montigny, C., see Blier, P., 7, 16
Dennis, D. M., Shryock, J. and Belardinelli, L.: Correlation of (-)**N-phenylisopropyladenosine blood levels with cardiac responses in the anesthetized guinea pig, 543
Denopamine, mechanism of action, regulation, myocardial contractility (rabbits), 1292
Deprenyl, stereoisomers, amphetamine-like discriminative stimulus effects (rats), 134
Dermorphin, central mu opioid receptor-mediated changes, renal function (rats), 134
Desai, M. C., see Piedimonte, G., 36
Desamino-8-D-arginine vasopressin, induced lithium reabsorption, no amiloride sensitivity (humans), 1267
-de Vry, J., see Schreiber, R., 572
Dexametomidine
-alpha-2 adrenoceptor-mediated antinociception, cholinergic interaction (sheep), 536
cross-tolerance of mu opioid and alpha-2 adrenergic receptors, spinal cord (rats), 551
-N^2-Diaryl-tyrosine-aryl-phenylalanine-leucine ICI 174, 864, blockade of cannabinoid-induced antinociception, norbinaltorphimine (mice), 633
Diazepam binding inhibitor receptors, action of 2-aryl-3-indoleacetamide and imidazo-pyridine derivatives (rats), 649
drug, chronic, precipitated abstinence syndrome (dogs), 1152
drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
DiBona, G. F., see Kapusta, D. R., 134
Dibromosophorphan, kinetic analysis, hepatobiliary transport, Eisai hyperbilirubinemic mutant rats, 1301
2,4-Dichlorophenoxyacetic acid, thermal and chemical tolerance, transepithelial transport, renal epithelium (flounder), 992
Dickenson, A. H., see Kalso, E. A., 551
2',3'-Dideoxyinosine, gastrointestinal and hepatic first-pass elimination (rats), 731
Dienemann, H., see Schwinger, R. H. G., 346
8-(Diethylamino)-octyl-3,4,5-trimethoxybenzoate, inhibition of cromakalim-induced **Rb efflux, aorta (rats), 1399
Dige-Petersen, H., see Boesgaard, S., 1239
3,4-Dihydro-1'-(2-benzofurazan-5-yl)ethyl-6-methanesulfonamido-pirol-(2H)-1-benzopyran-2,4'-piridine-4-one hydrochloride (flounder), 1205
Dihydro-β-erythroidine, diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1455
1,3-Dihydro-3-p-chlorophenyl-7-hydroxy-6-methyl-furo-[3,4-c] pyridinehydrochloride, antiproliferative and endothelium-dependent vasodilator properties (rats), 30
3,4-Dihydroxymethylamphetamine, central tetrophenyl hydroxylase activity (rats), 813
3,4-Dihydroxyniacetic acid, mediation of stress by 5-HT, receptors, periventricular hypothalamic dopaminergic neurons (rats), 303
4',4'-Diisothiocyanostilbene-2,2'-disulfonic acid, inhibition of gastric acid secretion (mice), 1313
Dikshit, M., Kumari, R. and Srima, R. C.: Pulmonary thromboembolism-induced alterations in nitric oxide release from rat circulating neutrophils, 1369
mex-2,3-Dimercaptoisuccinic acid, inhibition of bacterial growth, gallium ar-
Discriminative agonists, 1993
behavioral pharmacology of NPC 17742 (mice), 1055
neuronal circuits, 5-HT receptor agonists (rats), 572

Dietetics, thiazide, acute vascular effects, ion channel involvement (guinea pigs), 1175
Diz, D. I., see Jaiswal, N., 664
Disizulam, involvement of brain dopamine, behavioral action of MK-801, 6-hydroxydopamine-lesioned rats, 1001
DMPP, diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1455
DNA, fragmentation, morphine-like alterations, thymocyte subpopulations (mice), 81
Dobutamine, pharmacokinetics and pharmacodynamics, normal children and adolescents, 1232
Domino, E. F. and Sheng, J.: Relative potency and efficacy of some dopamine agonists with varying selectivities for D1 and D2 receptors in MPTP-induced hemiparkinsonian monkeys, 1387
Donati, P., see Glavinovic, M. I., 1181
Dong, X., see Tessel, R. E., 172
Donnerstein, R. L., see Berg, R. A., 1232
Dopamine agonists, relative potency and efficacy, MPTP-induced hemiparkinsonian monkeys, 1387
antagonists, modification of behavioral effects, 4-propyl-5-hydroxyphoxhydroxazine (monkeys), 1039
autoreceptor-selective agonists, electrophysiological effects, A10 dopamine neurons (rats), 963
brain, behavioral action of MK-801, 6-hydroxydopamine-lesioned rats, 1001
mesolimbic, hemifield, motivational effects of opioids, neurochemical substrates (rats), 53
metabolism in caudatus, monoamine oxidase-A inhibitors (rats), 103
NPC 16377 receptor binding, neurochemical and neuroendocrine profile (rats, mice), 866
oxidative stress and thiol modification, chronic haloperidol administration (rats), 1137
periventricular hypophysial neurons, mediation of stress, 5-HT2; receptors (rats), 303
serotonergic involvement, haloperidol-induced catalepsy (rats), 207
serotonin-facilitated release, pharmacological characterization (rats), 373
transmission, acute haloperidol administration (rats), 1193
turnover in nucleus accumbens, intracranial cocaine self-administration, medial prefrontal cortex (rats), 592
Dorn, G. W., II and Becker, M. W.: Thromboxane A2, stimulated signal transduction in vascular smooth muscle, 447
Dorsal raphe differential properties of 5-HT1A receptors effect of pertussis and cholera toxins (rats), 16
effect of spiperone (rats), 7
Dorsal raphe nucleus 5-HT1A receptor antagonist tertatolol (mice), 739
neuronal circuits, discriminative stimulus effects, 5-HT1 receptor agonists (rats), 572
Doughty, M. B., see Tessel, R. E., 172
Doxacurium, speed of action, neuromuscular junction binding vs. buffering hypothesis, 1181
DPEN, induction of feeding, opioid stimulation, ventral striatum (rats), 1253
Dretchen, K. L., see Fleming, N. W., 1199
Duttaroy, A., see Yoburn, B. C., 314
Dykstra, L. A., see Pfeito, K., 1079
Dykstra, L. A., see Lysle, D. T., 1071
Dynorphin A, morphine-induced antinociception, antagonism, intracerebroventricular administration of pentobarbital (mice), 1361
Drwonzczyk, S., see Grover, G. J., 559
Drwonzczyk, S., see Sargent, C. A., 609
Ear, vasculature, postjunctional role, neuropeptide Y (rabbits), 887
Earl, R. A., see Wong, F. C., 1088
Edema, inhibition of vascular leakage, tissue injury, neurotoxins peptides (rats), 619
Eikenburg, D. C., see Sadeghi, H. M., 657
Eisenach, J. C., see Detweiler, D. J., 536
El Amrani, A.-I. K., see Pham, L., 1339
Elastase, inhibitors, 5-methyl-4H-3,1-benzoazin-4-one derivatives, 516
Elayan, I., Gibb, J. W., Hanson, G. R., Lim, H. K., Foltz, R. L. and Johnson, M.: Short-term effects of 2,4,5-trihydroxy
yamphetpine, 2,4,5-trihydroxy-methamphetamine and 3,4-dihydroxy-yamphetpine on central tryp
tophan hydroxylase activity, 813
Electrical resistance, transepithelial, colonic mucosa, long-chain acylcarnitines (rats), 955
Electrolytes, modulators of transport, secretin and somatostatin, gallbladder epithelium (guinea pigs), 273
Electrophysiology autoreceptor-selective dopamine agonists, A10 dopamine neurons (rats), 963
GABA, receptor-channel complex, characterization, brain (rats), 985
inhibition of delayed rectifier potassium channels, 2.3-butanedione monoxime, Xenopus oocytes, 1011
Elliott, J. M., see Lynch, J. J. Jr., 720
Ellis, V. R., see Churchill, P. C., 334
Encephalopathy, hepatic, benzodiazepine receptor ligands (rats), 565
Endoh, M., see Kohi, M., 1292
N5-Endonorboren-2-yl-9-methyladenine, enantiomers and, atria (guinea pigs), 201
Endorphin, central mu opioid receptor-mediated changes, renal function (rats), 134
β-Endorphin, opioid-induced antinociception, role of neurotrans, periaqueductal gray (rats), 580
Endothelial cells, pulmonary artery, mechanism of putrescine transport (human), 60
Endothelin, differential effects, gastric longitudinal and circular smooth muscle (rats), 1413
Endothelium
- dependent relaxation of aorta, L- and D- enantiomers, N5-nitro-arginine (rats), 112
- dependent vasodilator properties, 1,3-di-hydro-3-p-chlorophenyl-7-hydroxy-6-methyl-furo-(3,4c)pymidine hydrochlo
ride, antiproliferative properties (rats), 30
- independent relaxation of aorta, tyramine (rats), 1096
Enfluazone, neuropehical actions, GABA, receptor complex (mouse), 1392
Enkephalin, analog biphahn, antinocicep
tive profile (mice), 1446
Enna, S. J., see Clissold, D. B., 876
Enna, S. J., see Karbon, E. W., 866
Epidermal growth factor, TGF-α and, inhibition of parietal cell function (rabbits), 308
Epinephrine, functional integrity and CNS and sympathetic nervous system, pressor and tachycardic effects, di
phenyleioidonium (rats), 263
Epinephrine, cardiac inotropic actions, coronary and pulmonary actions (human), 346
Epithelium
- gallbladder, modulators of electrolyte transport, secretin and somatostatin (guinea pigs), 273
- renal, thermal and chemical tolerance, transepithelial transport (flounder), 992
Erdmann, E., see Schirger, R. H. G., 346
Ergolines, species differences in pharmacology, 5-HT, receptor (rats), 1272
Ericsson, R. H., see Clissold, D. B., 876
Erickson, R. H., see Karbon, E. W., 866
Erythro-dl-l-(7-methylindan-4-xyloxy)-3-is
opropylaminobutan-2-ol, immunomodulatory effects of morphine, beta adrenergic receptor (rats), 1079
Esclapez, R., see Carpentier, C., 237
Eskur, S., see Sill, J. C., 74
Esposito, E., see Prisco, S., 739
Estrus cycle, influence on neurosteroid potency, GABA, receptor complex (rats), 1374
Ethanol
- behavioral effects, pentobarbital dependence (baboons), 47
- prevention of gastrointestinal damage by L-365,260 (rats), 1348
- sensitization of GABA-induced de
pressions, cerebellar Purkinje neurons, brain (rats), 436
- (2-4-Ethyl-1-piperazinyl)-4-(fluorophenyl)-5,6,7,8,9,10-hexahydro-cycloocta[b] pyridine, see AD-5423
antagonist MK-801, sites of action, mic\n\nturbation reflex (rats), 844
cytotoxicity, prevention by ifenprodil, po\nlyamine modulatory sites of NMDA receptors (rats), 1017
GM, treatment of focal ischemia (rats), 24
ischemic amino acid release and neuronal
injury, effects of S-312-d, stroke-
prone SHR rats, 463
Glutamic acid, increased intragastric pres-
sure, serotonin microinjection into
nucleus raphe obscurus, vagal mediation
(rats), 468
Glutathione, conjugation and amidase-cat\nalyzed hydrolysis, 2-bromoosavely-
lurea enantiomers, single-pass perfu-
sed liver (rats), 1406
Glybenclamide, A1-selective agonist
RG14202 (pigs), 699
Glyburide
cromakalim-induced 86Rb efflux in aorta, inhibition by 8-(diethy lamino)octyl-
3,4,5-trimethoxybenzoate (rats), 1399
natriuretic properties (rats), 933
Glycylisys, mitochondrial dysfunction and,
lethal injury to hepatocytes, t-butyl-
hydroperoxide (rats), 392
Goeders, N. E. and Smith, J. E.: Intracranial
cocaine self-administration into the
medial prefrontal cortex increases
amphetamine turnover in the nucleus ac-
cumbens, 592
Goldberg, S. R., see Yasar, S., 1
Gonzalez, W., see Pham, I., 1339
Gorman, R. R., see Benjamin, C. W., 457
Goudreau, J. L., Manzaneques, J., Looking-
land, K. J. and Moore, K. E.: 5HT2
receptors mediate the effects of stress
on the activity of periventricular hypo-
physyal dopaminergic neurons and the
secretion of a-melanocyte-stimu-
lulating hormone, 303
Goujon, J., see Cazaubon, C., 826
G proteins
carbachol-induced sodium current, ven-
tricular myocytes (guinea pigs), 641
differential properties of 5-HT1A recep-
tors, effect of pertussis and cholera
toxins, dorsal raphe and hippocam-
pus (rats), 16
Graham, A. G., see Farina, P. R., 483
Graham, S. H., see Simon, R. P., 24
Grayanotoxin, D-ring derivatives, struc-
ture-activity relationship, squid giant
axon, 1328
Grevel, J., see Ahmed, S. S., 1047
Griffiths, R. R., Evans, S. M., Guarino, J. J.,
Roache, J. D., Furman, W. R.,
Liebson, E. and Schwam, E. M.: In-
travenous flumazenil following acute
and repeated exposure to lorazepam
in healthy volunteers: Antagonism
and precipitated withdrawal, 1163
Griffiths, R. R., see Lamb, R. J., 47
Grizzle, M. K., see Shaffer, J. E., 1105
Gross, S. S., see Szabo, C., 674
Grover, G. J., Dzwonczyk, S., Sleph, P. G.
and Sargent, C. A.: The ATP-sensi-
tive potassium channel blocker gli-
benclamide (glyburide) does not abol-
ish preconditioning in isolated ische-
mic rat hearts, 559
Grover, G. J., see Sargent, C. A., 609

Growth factors, epidermal growth factor
and TGF-α, inhibition of parietal cell
function (rabbits), 308
Growth hormone, dependent cytokrome
PSG20 C11, irreversible suppression,
monosodium glutamate (rats), 979
Gu, Z.-Q., see Yurdaydin, C., 565
Guarino, J. J., see Griffiths, R. R., 1163
Guidotti, A., see Auta, J., 649
Guiraudou, P., see Cazaubon, C., 826
Gullans, S. R., see Brady, H. R., 1421
Gundel, R. H., see Farina, P. R., 483
Gunnell, M., see Owens, S. M., 1261
Guth, P. H., see Kauantz, J. D., 948
Guynet, P. G., see Baraban, S. C., 89
Haaseth, R. C., see Horan, P. J., 896
Halaka, N. N., see Lodge, N. J., 1399
Haloperidol
acute administration, enhancement, do-
paminergic transmission (rats), 1193
AD-5425 and, pharmacological activities,
anthropoietic efficacy and/or adverse
side effects (rats), 745
chronic administration, oxidative stress,
thiol modification (rats), 1137
increased extracellular acetylcholine lev-
els, sigma ligands, frontal cortex
(rats), 851
-induced catelepsy, serotonergic involve-
ment (rats), 207
Halothane
barbiturate anesthetics, depression of
resting K+ conductance, myocardiun
(frog), 358
neurochemical actions, GABA_A receptor
complex (mice), 1392
Hamann, S. R., see Parvin, S., 286
Hamilton, G. S., see Willets, J., 1055
Han, Z., Chatterjee, D. and Wyche, J. H.: Frolun-
eration of nontransformed cells is inhibited by adenosine metabolite
of but not by parental 8-Ciclic
AMP, 790
Hannano, M., see Sathirakul, K., 1301
Hanson, G. R., see Elayan, I., 813
Harris, B., Wong, G. and Skolnick, P.: Neuro-
chemical actions of inhalational anesthetics at the GABA_A recep-
tor complex, 1392
Hart, S. D., see Wong, P. C., 1088
Hartman, T., see Clissold, D. B., 876
Hartman, T. L., see Willets, J., 1055
Hatton, S., see Farina, P. R., 483
Hay, D. W. P., see Torphy, T. J., 1213
Hayashi, S., Horie, M. and Okada, Y.: Ionic
mechanism of minoxidil sulfate-in-
duced shortening of action potential
durations in guinea pig ventricular
myocytes, 1527
Heart
aorta and coronary vessels, discrimina-
tion of A8 adenosine receptors, 2-
phenoxyethoxy-9-methyladenine
(guinea pigs), 248
cardiovascular control, nicotine, brain
stem mechanisms (rats), 1511
cardiovascular effects of Ca++ channel ac-
tivators, BAY K 8444 and FPL 64176
(guinea pigs), 1125
electrophysiologic and antiarrhythmiec
actions, L-691,121 (guinea pigs), 720
failure, pharmacological characterization, SR
47436 (rats, dogs, monkeys), 826
pharmacology of XB513 (rats), 1088
increased atrial force and decreased ven-
tricular force, UL-FS 49 (dogs), 801
inotropic as well as coronary and pulmo-

nary actions, epine, tissues (hu-
man), 346
inotropic beta blocker, chimeric molecule
(dogs), 1105
ischemic, no abolishment of precondition-
ing, glibenclamide (rats), 559
microsomal fractions, indolin- and ro-
lipram-sensitive phosphodiesterases
(dogs, humans), 1142
modulation of performance, amiloride and
derivatives (rats), 1280
myocardial oxygen consumption, regional
contractile function, effects of MCI-
154 (dogs), 619
pharmacokinetics and pharmacody-
namics, dibutamine, normal children
and adolescents, 1232
responses, N6-phenylisopropyladenosine
blood levels (guinea pigs), 543
Hegde, S. S. and Clarke, D. E.: Character-
zation of angiotensin receptors me-
312-d, stroke-
prone SHR rats, 463
Hemicholinium-3, nictinic anticoine-
cession, adrenergic, serotonergic and
cholinergic components (rats), 777
Hemisaphragm, mechanical and electrical
responses, acute effects, calcitonin
gene-related peptide (rats), 1199
Hemiparkinsonian, MPTP-induced mon-
keys, relative potency and efficacy,
dopamine agonists, 1387
Henriksen, S. J., see Negus, S. S., 1245
Hepatocytes, lethal injury by t-butylhydro-
peroxide, mitochondrial and glyco-
lytic dysfunction (rats), 392
Herman, B., see Imberti, R., 392
Heroin, reinforcing effects, effect of antag-

onists, opioid mu/delta/kappa (rats), 1245
Herz, A., see Shippenberg, T. S., 53
Hightower, L. E., see Renfro, J. L., 992
Hildebrand, L. M., see Ault, B., 927
Hippocampus
central 5-HT1A and 5-HT1B auto receptor,
blocking properties, penbutolol
(rats), 707
differential properties of 5-HT1A recep-
tors
effect of pertussis and cholera toxins
(rats), 16
effect of spiropene (rats), 7
ischemic amino acid release and neuronal
injury, effects of S-312-d, stroke-
prone SHR rats, 463
neuronal circuits, discriminative stimulus
effects, 5-HT receptor agonists
(rats), 572
neurons
agonist site, nictinic acetylcholine recep-
tors (rats), 1474
diversity, nictinic acetylcholine recep-
tors (rats), 1455
Histamine
H2 antagonist drug complex, gastric ero-
sions (rats), 328
inhibition of parietal cell function, epi-
dermal growth factor, TGF-α (rab-
bits), 308
Hjorth, S. and Sharp, T.: In vivo microdi-
Index

Hoffman, J. I. E., see Fiedmonte, G., 36
Holbrook, J. M., see Pollock, S. H., 113
Holopainen, I., see Contrera, J. G., 433
Holtz, A. G., see Yurdaydin, C., 565
Homon, C. A., see Farina, P. R., 483
Horie, M., see Hayashi, S., 1527
Horie, S., Yano, S. and Watanabe, K.: Inhibition of gastric acid secretion in vivo and in vitro by an inhibitor of CI⁻-HCO₃⁻ exchanger, 4,4'-disiothio-cyanostilbene-2,2'-disulfonic acid, 1313
Horie, T., see Sathirakul, K., 1301
Hornby, P. J., see Krowicki, Z. K., 468
Howell, L. L.: Effects of adenosine agonists on ventilation during hypercapnia, hypoxia and hyperoxia in rhesus monkeys, 971
Hruby, V. J., see Horan, P. J., 896, 1446
Hudzik, T. J. and Wenger, G. R.: Effects of drugs of abuse and nociceptive agents on delayed matching-to-sample responding in the squirrel monkey, 120
Hughes, A. D., see Garcha, R. S., 860
Humphrey, S. J., see Clark, M. A., 303
Husain, F. A., see Pollock, S. H., 1113
Husseini, W. K., see Fiedmonte, G., 36
Hutter, J. J., Jr., see Berg, R. A., 1232
Hydrochlorothiazide, acute vascular effects of thiazide diuretics, ion channel involvement (guinea pigs), 1175
Hydrogen peroxide, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
4-Hydroxy-a-methyl-phenyl-2-aminoethyl sulfide, oral antihypertensive activity (rats), 1113
Hypercapnia, hypoxia and, effects of adenosine agonists, ventilation (monkeys), 971
Hyperphagia, hepatothelial excretory function, chronic physical activity (rats), 321
Hypertension blood pressure and renal function, converting enzyme inhibitor, neutral endopeptidase inhibitor (rats), 1339 effects of nicotine, brain stem mechanisms, cardiovascular control (rats), 1511 pharmacological characterization, SR 47436 (rats, dogs, monkeys), 826 salt-induced, prevention by losartan, reduced renal mass rats, 1131 vasoconstrictor activity in mesenteric vasculature, quinapril (rats), 187
Hypothermia, cannabinoid structure-activity relationship receptors, receptor binding, in vivo activities (rats), 218
Hypoxia, effects of adenosine agonists, ventilation (monkeys), 971
Ibomopine, cardiac inotropic actions, coronary and pulmonary actions, epinine (human), 346
ICI 174,864, blockade of cannabinoid-induced antinociception, norbinaltorphimine (mice), 653
Idazoxan, nicotinic antinociception, adrenergic, serotonergic and cholinergic components (rats), 777
Ifenprodil
NPC 16377, behavioral and neuroprotective profile (rats, mice, gerbils), 876 prevention of glutamate cytotoxicity, polyaniline modulatory sites, NMMA receptors in cortical neurons (rats), 1017
Ileum opiate-dependent, concentration-response curve, precipitated absence responses (guinea pigs), 1519 pharmacological characterization of FK1052 (rats, guinea pigs), 752
Im, H. K., Im, W. B. and Tsauzuki, K.: Selective block of transient CA channel current in mouse neuroblastoma cells by U-88779E, 599
Im, W. B., see Im, H. K., 529
Imai, S., see Luo, D.-L., 1187
Imberti, R., Nieminen, A.-L., Herman, B. and Lemasters, J. J.: Mitochondrial and glycolytic dysfunction in lethal injury to hepatocytes by t-butylhydroperoxide: Protection by fructose, cyclosporin A and trifluoperazine, 392
Imidazoypiridine, derivatives, mitochondrial diazepam binding inhibitor receptors (rats), 649
3,3'-Dimidoipipionitrile, region-dependent damage to central nervous system, levels above brain stem (rats), 1492
Imipramine, chronic treatment, adaptive changes, NMMA receptor complex (mice), 1380
Immune status, morphine-induced alterations, naloxone (rats), 1071
Immunosuppression, gallium arsenide-induced suppression, antibody-forming cell response, reversal by vehicle supernatants (mice), 144, 150
Indapamide, acute vascular effects of thiazide diuretics, ion channel involvement (guinea pigs), 1175
Indocyanine green, kinetic analysis, hepatothelial transport, Eisaí hyperbilirubinemic mutant rats, 1301
Indolidan, -sensitive cyclic nucleotide phosphodiesterases, cardiac microsomal fractions (dogs, humans), 1142
Indometacin endothelium-dependent relaxation of aorta, L- and D-enantiomers, N²-nitro-arginine (rats), 112 flurbiprofen and, methotrexate elimination and interaction, kidney (rats), 1118
-induced lithium reabsorption, no amiloride sensitivity (humans), 1267
prejunctional beta adrenoeceptors, sympathetic neurotransmission, mesenety (rats), 657
Inoue, Y., see Furukawa, Y., 801
Interleukin 2o, altered CD25 expression, inhibition of T cell proliferation, galium arsenide (mice), 178
Interleukins, antibody-forming cell response, gallium arsenide-induced suppression, reversal by vehicle supernatants (mice), 150
Intestine, motility and nociception, Phe-Leu-Phe-Gin-Pro-Arg-Phe-NH₂ amide analogs (rats), 96 ion channel, acute vascular effects, thiazide diuretics, related compounds (guinea pigs), 1175
Ion current, 5-HT₃ receptor-mediated, trichlorehanol potentiation, nodose ganglion neurons (rats), 771
Ions, minoxidil sulfate-induced shortening, action potential durations, ventricular myocytes (guinea pigs), 1527
Ipsapiron, neuronal circuits, discriminative stimulus effects, 5-HT receptor agonists (rats), 572
Ischemia amino acid release and neuronal injury, effects of S-312-d, stroke-proene SHR rats, 463 focal, GM treatment (rats), 24 Ishibashi, T., see Luo, D.-L., 1187
Isolurane attenuation of Ca²⁺ mobilization, vascular smooth muscle cells, 74 neurochemical actions, GABA receptor complex (mice), 1392
Isoprotenerol prejunctional beta adrenoeceptors, sympathetic neurotransmission, mesenety (rats), 657
relaxation of coronary arteries, calcium ion-gene-related peptide (pigs), 490 sensitization of GABA-induced depressions, cerebellar Purkinje neurons, beta adrenergic mechanisms and ethanol (rats), 426
Iwamoto, E. T. and Marion, L.: Adrenergic, serotonergic and cholinergic components of nicotinic antinociception in rats, 777
Iwasa, J., see Yakehiro, M., 1328
Jain, S., see Pierce, G. N., 1280
Jaiswal, R. K., see Jaiswal, N., 664
Johansen, P. A., see Ackerman, J. M., 963
Johnson, A. L., see Wong, P. C., 1088
Johnson, K. B., see Criswell, H. E., 1001
Johnson, M., see Elyan, I., 813
Johnson, M. R., see Compton, D. R., 218
Jones, B. E., see Clissold, D. B., 876
Joyce, J. N., see Neal-Beliveau, B. S., 207
metabolic activation of flutamide, cytochromes P-450 (rats, humans), 366
pharmacological characterization, SR 47436 (rats, dogs, monkeys), 826
Liver microsomes, metabolism of cyclosporine A and FK-506, adrenocorten release, action, oxygen radicals (rats, humans), 1047
Llorens, J., Crofton, K. M. and O’Callaghan, J. P.: Administration of 3,3’-imino-dipropionitrile to the rat results in region-dependent damage to the central nervous system at levels above the brain stem, 1492
Locomotor activity cannabinoid structure-activity relationships, receptor binding, in vivo activities (rats), 218
somatostatin receptors in nucleus accumens (rats), 67
Lodge, N. J. and Halaka, N. N.: 8-(Diethylamino)-octyl-3,4,5-trimethoxybenzoate inhibits cromakalin-induced “Rb efflux from the rat aorta, 1399
Loeper, J., see Berson, A., 366
Longenecker, K. L., see Sokol, P. P., 60
Longone, P., Moccetti, I., Riva, M. A. and Wojcik, W. J.: Characterization of a decrease in muscarinic m, mRNA in cerebellar granule cells by carbachol, 441
Lookingbill, K. J., see Goudreau, J. L., 303
Lopatin, A. N. and Nichols, C. G.: 2,3-butanedione monoxide (BDM) inhibition of delayed rectifier (DRK1) potassium channels expressed in Xenopus oocytes, 1011
Lorazepam acute and repeated exposure, intravenous flunazenil (humans), 1163
behavioral effects, pentobarbital dependence (baboons), 47
Losartan intrinsic properties, glomeruli and mesangial cells (rats), 1534
prevention of salt-induced hypertension, reduced renal mass rats, 1131
Lovinger, D. M. and Zhou, Q.: Trichloroethanol potentiation of 5-hydroxytryptamine, receptor-mediated ion current in nodose ganglion neurons from the adult rat, 771
Lucaitis, V. L., see Nelson, D. L., 1272
Lucey, M. R., see Wang, L., 308
Lucki, I., see Neale-Beliveau, B. S., 207
Lucki, I., see Raymond, K., 67
Ludens, J. H., see Clark, M. A., 933
Lukas, R. J.: Expression of ganglia-type nicotinic acetylcholine receptors and nicotinic ligand binding sites by cells of the IMR-32 human neuroblastoma clonal line, 294
Lung actions of epineph in tissues (human), 346 cytochrome P450, inhibition, N-aralkyl derivatives of 1-aminobenzotriazole (rabbits), 281
inhibition and induction, cytochrome P450 isozymes (rats), 386
pulmonary artery endothelial cells, mechanism, putrescine alterations, (human), 60 thromboembolism-induced alterations, nitric oxide, circulating neutrophils (rats), 1369
Luo, D.-L., Nakazawa, M., Ishibashi, T., Kato, K. and Imai, S.: Putative, selective inhibitors of saccoplasmic reticulum Ca++-pump ATPase inhibit relaxation by nitroglycerin and atrial natriuretic factor of the rabbit aorta contracted by phenylephrine, 1187
Luttman, M. A., see Tropf, T., J., 1213
LY3857, nicotinic antinociception, adrenergic, serotonergic and cholinergic components (rats), 777
Lympocytes, thymocyte subpopulations, morphine-like alterations (mice), 81
Lynch, C., III, see Pancrazio, J. J., 358
Lysle, D. T., see Fecho, K., 1079
Ma, D., see Auta, J., 649
Ma, P., see Wong, P. C., 1088
Macherey, H. J., see Sprakties, G., 273
Macroproach, induction of nitric oxide synthase, bacterial lipopolysaccharide, inhibition (mice), 674
Maddaford, T. G., see Pierce, G. N., 1280
Mallecic, A., see Pereira, E. F. R., 1474
Maggi, C. A., see Giulini, S., 1224
Magnesium, chimeric kainate/NMDA receptors, expression in Xenopus oocytes, mammalian and amphibian RNA (rats), 910
Mahan, L. C., see Valely, A. Y., 985
Major, T. C., Overhiser, R. W., Taylor, D. G., Jr. and Panek, R. L.: Effects of quinapril, a new angiotensin-converting enzyme inhibitor, on vasoconstrictr activity in the isolated, perfused mesenteric vasculature of hypertensive rats, 187
Malatynska, E., see Horan, P. J., 1446
Mansbach, R. S., see Clissold, D. B., 876
Manzanares, J., see Goudreau, J. L., 303
Manzini, S., see Parlini, M., 713
Marion, L., see Iwamoto, E. T., 777
Martin, B. J., see Yiamouyiannis, C. A., 321
Martin, B. R., see Compton, D. R., 218
Martin, G. E., see Pendley, C. E., 1348
Martin, L. A., see Karbon, E. W., 866
Martin, P. L., see Barrett, R. J., 227
Martin, P. L., Ueda, M. and Olson, R. A.: 2-Phenylhex-9-ymlmethydine: An adenosine agonist that discriminates between A2 adenosine receptors in the aorta and the coronary vessels from the guinea pig, 248
Martin, W. J., I, see Sokol, P. P., 60
Martin, W. R., see Farvini, S., 286
Martin, W. R., see Sloane, M., 1152
Masselli, H., see Pierce, G. N., 1280
Mathews, J. M. and Bend, J. R.: N-Arylalkyl derivatives of 1-aminobenzotriazole as potent isozyme-selective mechanism-based inhibitors of rabbit pulmonary cytochrome P450 in vivo, 281
Matsunaga, K., Matsunaga, S., 498
Matsunaga, S., Matsubara, R., Kusumi, I., Koyama, T. and Yamashita, I.: Dopamine D1 and D2 and serotonin, receptor occupation by typical and atypical antipsychotic drugs in vivo, 498
Matsumoto, K., see Shirayama, T., 641
Matsumura, K., see Gemba, T., 463
Matsumura, K., see Gemba, T., 463
Matsumoto, K., Matsunaga, K., Send, T. and Mita, S.: Increase in extracellular acetylcholine level by sigma ligands in rat frontal cortex, 851
Mattia, A., see Horan, P. J., 1446
Mattos, A., see Negus, S. S., 1245
Maurer, P., see Berson, A., 366
May, J. M., see Barrett, R. J., 227
May, S. W., see Pollock, S. H., 1113
McCull, D. E., see Wong, P. C., 1088
McCay, J. A., see Burns, L. A., 795
MCF-7 cells, Purinergic receptors (humans), 1499
MCI-154, a regional contractile function, myocardial oxygen consumption, coronary artery stenosis (dogs), 819
McKenna, D. G., see Martin, P. L., 201
McLeskey, S. W., see Contrera, J. G., 433
McManus, M. E., see Tassaneeyakul, W., 403
McNamara, P. J., see Chaudhary, I., P., 1333
McPherson, C. D., see Pierce, G. N., 1280
McQuay, H. J., see Kalso, E. A., 551
MDL-72222, increased intragastric pressure, serotonin microinjection into nucleus raphe obscurus, vagal mediation (rats), 468
Mecamylamine, a medullary hyperalgesic center, pharmacological characteristics (rats), 286
Medial prefrontal cortex, intracranial cocaine self-administration, dopamine turnover in nucleus accumbens (rats), 592
Mees, E. J. D., see Bijlsma, J. A., 1267
α-Melanocyte-stimulating hormone, mediation of stress by 5-HT3 receptors, periventricular hypophysial dopaminergic neurons (rats), 303
Melvin, L. S., see Compton, D. R., 218
Mennini, T., see Frisco, S., 739
Mesangial cells, glomeruli and, intrinsic properties, losartan (rats), 1534
Mesentry
sympathetic neurotransmission, modulation by prejunctional beta adrenoceptors (rats), 857
vasculature, vasoconstrictor activity, quinapril (rats), 187
Meso-2,3-dicarboxypropanoic acid, gallium arsenide-induced suppression, anti-body-forming cell response, reversal by vehicle supernatant (mice), 144, 150
Mesolimbic system, dopamine receptors, motivational effects of opioids, neurochemical substrates (rats), 53
Methiothepin
 differential properties of 5-HT1A receptors, effect of sipperone, dorsal raphe and hippocampus (rats), 7 increased intragastic pressure, serotonin microinjection into nucleus raphe obscurus, vaginal mediation (rats), 468
Methoctramine, nicotinic antagonism, adrenergic, sympathetic and cholinergic components (rats), 777
Methotrexate, elimination and interaction, indomethacin and flurbiprofen, kidney, (rats), 1118
S-(+)-Methyl-4,7-dihydro-3-isobutyl-6-methyl-4-(3-nitrophenyl)thieno[2,3-d]pyridine-5-carboxylate, see S-312-d
N-Methyl-D-aspartate
antagonist NPC 17742, behavioral pharmacology (mice), 1055
6-hydroxydopamine-lesioned rats, involvement of brain dopamine, behavioral action of MK-801, 1001 prevention of glutamate cytotoxicity, ifenprodil, cortical neurons (rats), 1017
N-Methylcarbachol, nicotinic antagonism, adrenergic, serotoninergic and cholinergic components (rats), 777
Methyltidal bis(guanidinohydrazone), mechanism of putrescine transport, pulmonary artery endothelial cells (human), 60
5-Methyl-4H-3,1-benzoxazin-4-one, derivatives, inhibitors of human leukocyte elastase, 649
1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine, relative potency and efficacy, dopamine agonists, hemiparkinsonian monkeys, 1387
\( \alpha \)-Methyl-phenyl-2-aminoethyl sulfide, oral antihypertensive activity (rats), 1113
Methylprednisolone, morphine-like alterations, thymocyte subpopulations (mice), 81
Methylocaponomalin, drugs of abuse and cholinergic agents, delayed matching-to-sample responding (mice), 120
Michel, J.-B., see Pham, I., 1339
Microdialysis
central 5-HT1A and 5-HT1B autoreceptor, blocking properties, penbutolol (rats), 707
GM1 treatment of focal ischemia (rats), 24
increased extracellular acetylcholine levels, sigma ligands, frontal cortex (rats), 851
ischemic amino acid release and neuronal injury, effects of S-312-d, stroke-prone SHR rats, 463
1,2,3,4-tetrahydro-9-aminoacridine, extracellular concentration of acetylcholine, stroma (rats), 759
Microinjection, serotonin, increased intragastric pressure, nucleus raphe obscurus (rats), 468
Microiophoresis, differential properties of 5-HT1A receptors, effect of pertussis and cholera toxins, dorsal raphe and hippocampus (rats), 16
Microsomes, cardiac, indolindan and rilpam-sensitive cyclic nucleotide phosphodiesterases (dogs, humans), 1142
Micturition
nonadrenergic and noncholinergic control, external urethral sphincter, nitric oxide (rats), 713
reflex, effects of MK-801, sites of action (rats), 844
Mizadolar, morphine-induced antinociception, antagonism, intracerebroventricular administration of pentobarbital (mice), 1361
Mifepristone, progesterone and, responses to oxytocin, circular myometrium (rats), 1205
Miller, D. W., see Tessel, R. E., 172
Miller, J. R., see Barrett, R. J., 227
Miller, R. J., see Focurt, S., 903
Million, M., Fioramonti, J., Giqquel, S., Zajac, J. M. and Bueno, L.: Comparative action of Phe-Leu-Phe-Gln-Pro-Gln-Ang-Phe-NH2 amides on intestinal motility and nociception in rats, 96
Miners, J. O., see Tassaneeyakul, W., 401
Minoxidil sulfate, -shortened duration of action potential durations, ionic mechanisms, ventricular myocytes (guinea pigs), 1527
Mischke, A., see Horan, P. J., 896, 1446
Misses, G. A., see Tessel, R. E., 172
Mita, S., see Mathuou, K., 951
Mitchell, J. A., see Szabdó, C., 674
Mitochondria
diazepam binding inhibitor receptors, action of 2-aryl-3-indolocetamide and imidazopyridine derivatives (rats), 684
differential actions of cisplatin, inner medullary collecting ducts, renal proximal tubule (rabbits), 1421
glycylcic acid dysfunction and, lethal injury to hepatocytes, t-butyllhydroperoxide (rats), 392
inhibitors, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
Miura, Y., see Noda, Y., 745
Miyoamato, Y., Portoghese, P. S. and Take-mori, A. E.: Involvement of \( \delta \) opioid receptors in acute dependence on dopamine, 851
MK-591, inhibition of biosynthesis, leukotriene generation and metabolism (dogs), 416
MK-801
behavioral action, involvement of brain dopamine, 6-hydroxydopamine-lesioned rats, 1001
chimeric kainate/NMDA receptors, expression in Xenopus oocytes, mammalian and amphibian RNA (rats), 910
micturnition reflex, sites of action (rats), 844
Mocetti, L., see Longone, P., 441
Moclobemide, monoamine oxidase-A inhibitors, dopamine metabolism, caudatus (rats), 103
Molinno, B. F., see Pendley, C. E., 1348
Monito, C., see Kurth, C. D., 587
Monoamine oxidase-A, inhibitors and dopamine metabolism, caudatus (rats), 103
Monoxygenases, inhibition and induction, cytochrome P450 isoenzymes, lungs (rats), 386
Monosodium glutamate, irreversible suppression, growth hormone-dependent cytochrome P450 C211 (rats), 979
Moore, K. E., see Goudreau, J. L., 303
Moreland, R. S., see Fulginiti, J., III, 1413
Mori, K. E., see Nagakura, Y., 752
Morphine
activation of nociceptive reflexes, peripheral kainate receptors (rats), 927
acute dependence, involvement, \( \delta \) opioid receptors (mice), 1325
acute opioid dependence, cardiovascular system, rat, 128
drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
immunomodulatory effects, beta adrenergic receptor (rats), 1079
"-induced alterations
immune status, naltrexone (rats), 1071
thymocyte subpopulations (mice), \( \beta \) -induced antinociception, antagonism, intracerebroventricular administration of pentobarbital (mice), 1361
modulation of spinal nociceptive transmission, 5-HT1A and 5-HT1B receptor subtypes (mice), 378
mu opiate receptor down-regulation, up-regulation by naloxone, neuroblastomas cells (humans), 254
naloxone-precipitated withdrawal, respiratory control, sympathetic nerve activity (rats), 89
opioid-dependent ileum, concentration-response curves, precipitated absence responses (guinea pigs), 1519
opioid-induced antinociception, role of neurotensin, periaqueductal gray (rats), 580
opioid receptor regulation (mice), 314
supraspinal mu analgesic systems, genetically different mouse strains, 166
Morris, J., see Benjamin, C. W., 457
Mosquera-Garcia, R., see Tseng, C.-J., 1511
Mucosa
colonie, permeability and morphology, long-chain acylcarnitines (rats), 955
gastric mucosal gel thickness, surface cell viability and \( p \text{H} \), effect of orogastric nicotine (rats), 948
nasal, neurogenic vasodilation, neurokinin, tachykinin receptors (rats), 36
Mueller, R. A., see Criswell, H. E., 1001
Mulder, G. J., see Polhuijs, M., 1406
Muller, B., see Lugnier, C., 1142
Munson, A. E., see Burns, L. A., 144, 150, 178, 79
Murray, M., Cantrill, E. and Farrell, G. C.: Induction of cytochrome P450 2Bl in rat liver by the aromatase inhibitor aminoglutethimide, 477

Muscle

gastric longitudinal, endothelin effects (rats), 1413
hemidiaphragm, mechanical and electrical responses, calcitonin gene-related peptide (rats), 1199

Muscle, smooth
action of amiodine, subcutaneous resistance arteries (humans), 860
airway functional role, phosphodiesterase iso-
yzymes (humans), 1213
function during development, Bay K 8644 and CGP 28392 (guinea pigs), 524

antiproliferative and endothelin-dependent vasodilator properties, 1,3-dihydro-3-p-chlorophenyl-7-
hydroxy-6-methyl-furo-(3,4c)pyri-
dine hydrochloride (rats), 30
aortic, prostaglandin synthesis, angioten-
sine peptides (66), 546

circular, endothelin effects (rats), 1413
cromakalim-induced Na+/K+ efflux in aorta, inhibition by 8-(diethylamino)-octyl-
3,4,5-trimethoxybenzoate (rats), 1399
mesenteric vasculature, vasoconstrictor activity, quinapril (rats), 187
relaxation of coronary arteries, calcitonin gene-related peptide (pigs), 490
vascular attenuation of Ca++ mobilization, isoflurane, 74
stimulated signal transduction, throm-
boxane A2 (rats), 447
vas deferens, contractile responses, atrial natriuretic peptide (guinea pigs), 920

Muscle relaxants, speed of action, neuro-
vascular junction binding, buffering hypothesis, 1181

Mutafova-Yambolieva, V. N., Venkova, K. M. and Lasova, L. S.: Atrial natriuretic peptide inhibits the purinergic and not the adrenergic component of electrically induced contractile responses in guinea pig vas deferens, 920

Myocardium
contractility, mechanism of action, deno-
pamine (rabbits), 1292
depression of resting K+ conductance, barbiturate anesthetics (frog), 358
infarction, electrophysiological and antiar-
rhythmic actions, L-691,121 (guinea pigs), 720
ischemia, cardioprotection with zofeno-
pril, ATP-sensitive potassium channel (rats), 609

Myocytes
ventricular action potential durations, minoxidil sulfate-induced shortening (guinea pigs), 1527
carbachol-induced sodium current, guanine nucleotides (guinea pigs), 64

Myometrium, circular, progesterone and mi-
ferestrone, responses to oxytocin (rats), 1205
Neurotransmitters, serotonin-facilitated dopamine release, pharmacological characterization (rats), 373
Neutral endopeptidase inhibitor, converting enzyme inhibitor and, blood pressure and renal function, hypertension (rats), 1339
Neutrophils, circulating, pulmonary thromboembolism-induced alterations, nitric oxide release (rats), 1369
Nichols, G. D.: The calcium channel antagonist, nimodipine, blocks the cyclic GMP-activated current in rod photoreceptors, 626
Nicotine antinoceptive, adrenergic, serotonergic and cholinergic components (rats), 777
brain stem mechanisms, cardiovascular control (rats), 1511
diversity of nicotinic acetylcholine receptors, hippocampal neurons (rats), 1455
drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
ganglia-type nicotinic acetylcholine receptors, neuroblastoma clone line (humans), 294
gastrointestinal, gastric mucosal cell thickness, surface cell viability and pH (rats), 948
pharmacological characteristics, medullary hypergesic center (rats), 286
Niemenen, A.-L., see Imberti, R., 392
Nifedipine effects of lemakalim, comparison of vasodilators (dogs), 1026
inhibition of induction of nitric oxide synthase, bacterial lipopolysaccharide (mice), 674
Nilotinamide, metabolic activation of flutamidine, cytochromes P-450 (rats, humans), 366
Nimoniya, M., see Gemba, T., 463
Nisato, D., see Cazabon, C., 626
Nishizaki, Y., see Kaunitz, J. D., 948
Nissen, J. S., see Nelson, D. L., 1272
Nitrate, inhibition of angiotensin converting enzyme, N-acetylcycteine (rats), 1239
Nitric oxide inhibitory control of external urethral sphincter (rats), 713
pharmacological characterization, renovascular P2 purinergic receptors (rats), 334
pulmonary thromboembolism-induced alterations, release from circulating neutrophils (rats), 1369
role in neurogenic vasodilation, cerebral artery (pig), 339
Nitric oxide synthase functional integrity of CNS and sympathetic nervous system, pressor and tachycardic effects, diphenylenoiodonum (rats), 263
induction by bacterial lipopolysaccharide, inhibition by nifedipine (mice), 674
NOS-Arginine, L- and d-enantiomers, endothelium-dependent relaxation, aorta (rats), 112
Nitroaromatic compounds, metabolic activation of flutamidine, cytochromes P-450 (rats, humans), 366
NMDA receptors,see Betaxolol, terazosin, prazosin, tamsulosin (dogs), 948
Nociception activation of nociceptive reflexes, peripheral kainate receptors (rats), 927
intestinal mobility and, Pe-Leu-Phe-Gln-Pro-Arg-Phe-NH2 amide analogs (rats), 96
modulation of kainic acid-induced activity, amino terminus of substance P, spinal cord (mice), 159
spinal transmission, modulation, 5-HT1A and 5-HT1B receptor subtypes (mice), 378
Noda, Y., Kurumiya, S., Miura, Y. and Oka, M.: Comparative study of 2-(4-ethyl-1-piperazinyl)-4-(fluorophenyl)-5,6,7,8,9,10-hexahydro-4,9-dioxocycloocta[bl]pyridine (AD-5423) and haloperidol for their pharmacological activities related to antipsychotic efficacy and/or adverse side-effects, 745
Non-steroidal anti-inflammatory drugs, anti-inflammatory-histamine H2 antagonist, gastric erosions (rats), 328
Norbinaltorphimine, blockade of cannabinoid-induced antinoception (mice), 633
Nordberg, A., see Xiao, W.-B., 759
Nordiazepam, temazepam and, formation and metabolism of oxazepam, liver (mice), 1429, 1437
Norepinephrine constriction of cerebral arteries, cocaine and its metabolites (piglets), 587
functional characterization, alpha adrenergic, intravenous arteries (rabbits), 807
functional integrity and CNS and sympathetic nervous system, pressor and tachycardic effects, diphenylenoiodonum (rats), 263
lipolytic responses of adipocytes, desensitization, beta 1 and beta-2 adrenergic receptors (hamsters), 237
prejunctional beta adrenergic receptors, sympathetic neurotransmission, mesentry (rats), 657
sensitization of GABA-induced depressions, cerebellar Purkinje neurons, beta adrenergic mechanisms and ethanol (rats), 426
Normandin, D., see Sargent, C. A., 609
Norota, I., see Kohi, M., 1292
Nowak, G., see Yurdagyn, C., 565
Nowak, G., Trullas, R., Layer, R. T., Skolnick, P. and Paul, I. A.: Adaptive changes in the N-methyl-D-aspartate receptor complex after chronic treatment with imipramine and 1-amino-cyclopropanecarboxylic acid, 1380
NPC 16377 behavioral and neuroprotective profile (mice, rats, gerbils), 876
receptor binding, neurochemical and neuroendocrine profile (rats, mice), 866
NPC 17742, behavioral pharmacology (mice), 1055
Nucleotide phosphodiesterases, cyclic, indolidain- and rolipram-sensitive, cardiac microsomal fractions (dogs, humans), 1142
Nucleus accumbens dopamine turnover, intracranial cocaine self-administration, medial prefrontal cortex (rats), 592
motivational effects of opioids, neurochemical substrates, mesolimbic dopamine system (rats), 53
somatostatin receptors, locomotor activity (rats), 67
Nucleus raphe magnus, opioid-induced antinoception, role of neurotransin, periaqueductal gray (rats), 586
Nucleus raphe obscurus, serotonin microinjection, increased intragastric pressure, vagal mediation (rats), 468
Obesity, phenobarbital treatment and, hepatic conjugation pathways (rats), 1333
Obih, J. C., see Kapusta, D. R., 134
O’Callaghan, J. P., see Llorens, J., 1492
Ochrotoxin A, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
Octopaminergic agonists, selectivity for octopamine receptor subtypes (fireflies, hornworms), 509
Ogata, H., see Takahashi, H., 681
Ogonowski, A. A., see Pollock, S. H., 1113
5-OH-DPAT 5-HT1A receptor antagonist tertatolol, brain (rats), 739
increased intragastric pressure, serotonin microinjection into nucleus raphe obscurus, vagal mediation (rats), 468
neuronal circuits, discriminative stimulus effects, 5-HT receptor agonists (rats), 572
serotonergic involvement, haloperidol-induced catalepsy (rats), 207
Ohira, M., see Takahashi, H., 681
Oka, M., see Noda, Y., 745
Okada, Y., see Hayashi, S., 1527
Okamoto, M., Viskatis, L. J., de la Roza, G. and Vidal, J. C.: Induction of tolerance to crotoxin in mice, 41
Olsom, R. A., see Martin, P. L., 248
Oocytes Xenopus chimeric kainate/NMDA receptors, mammalian and amphibian RNA (rats), 910
inhibition of delayed rectifier potassium channels, 2,3-butanedione monoxide, 1011

Opiates
acute opioid dependence, cardiovascular system, 128
-
dependent ileum, concentration-response curves, precipitated absence responses (guinea pigs), 1519

Opioids
acute dependence, cardiovascular system, spinal rat, 128
antinamists, modulation of kainic acid-induced activity, spinal cord (mice), 159
behavioral effects of sedative drugs, pentobarbital dependence (baboons), 47
delta receptor multiplicity, substituted deltorphins (mice), 896
-
duced antinoicceptive, role of neurotensin, periaqueductal gray (rats), 580
intestinal mobility and nociception, Phen-leu-Phen-Pro-Arg-Phe-NH$_2$ amide analogs (rats), 96
motivational effects, neurochemical substrates, mesolimbic dopamine system (rats), 53
naloxone-prefacitated morphine withdrawal, dorsal spinal, sympathetic nerve activity (rats), 89
receptor regulation (mice), 314
reinforcing effects of heroin, effect of antagonists, opioid mu/delta/kappa (rats), 1245
stimulation, induction of feeding, ventral striatum (rats), 1253
Oshida, J.-I., see Uejima, Y., 516
Otagiri, M., see Imai, T., 328
Oubain, hepatothypothalamic excretion function, chronic physical activity (rats), 321
Overhiser, R. W., see Major, T. C., 187
Owen, M. P.: Functional characterization of alpha adrenoceptors on rabbit intrarenal arteries in vitro, 807
Owen, M. P.: Similarities and differences in the postsynaptic role for neuropeptide Y in sympathetic vasomotor control of large vs. small arteries of rabbit renal and ear vasculature, 887
Owens, S. M., Gunnell, M., Laurenzana, E. M. and Valentine, J. L.: Dose- and time-dependent changes in phencyclidine metabolite covalent binding in rats and the possible role of CYP2D1, 1261
Oxazepam, formation and metabolism, noroxazepam and temazepam, liver (mice), 1437
Oxidants, induced cell death, extracellular acidosis, renal proximal tubules (rabbits), 1355

Oxygen
consumption, effects of MCI-154, coronary artery stenosis (dogs), 819
oxidative stress and thiol modification, chronic administration, haloperidol (rats), 1137
Oxygen free radicals
adrenochrome reaction, metabolism of cys-closporin A and FK-506, liver mitochondria (rats, humans), 1047
differential actions of cispaltin, inner medullary collecting ducts, renal proximal tubule (rabbits), 1421

Oxytocin, progesterone and mifepristone, responses of circular myometrium (rats), 1205
Padbury, J. F., see Berg, R. A., 1232
Palmer, M. R., see Lin, A. M.-Y., 426
Pampori, N. A., see Shapiro, B. H., 979
Panagia, J. J., Frazer, M. J. and Lynch, C., III: Barbiturate anesthetics depress the resting K$^+$ conductance of myocardium, 358
Pancreas, polypeptide and neuropeptide Y, reduction of calcium currents, dissociated neurons from superior cervical ganglia (rats), 903
Pancuronium, speed of action, neuromuscular junction binding vs. buffering hypothesis, 1181
Panek, R. L., see Major, T. C., 187
Pang, C. C. Y., see Wang, Y.-X., 112, 263
Pang, K. S., see Polhuijs, M., 1406
Pang, K. S., see St.-Pierre, M. V., 1429, 1437
Pappano, A., see Shirayama, T., 641
Parasympathetic nervous system, mechanism of bradycardia, anticholinesterase neostigmine (cats), 194
Parietal cells, inhibition of function, epidermal growth factor, TGF-$

c$, 308
Parker, S. L., see Renfro, J. L., 992
Parker's disease, involvement of brain dopamine, behavioral action of MK-801, 6-hydroxydopamine-lesioned rats, 1001
Parlani, M., Conte, B. and Manzini, S.: Nonadrenergic, noncholinergic inhibitory control of the rat external urethral sphincter: Involvement of nitric oxide, 713
Pasternak, G. W., see Negus, S. S., 1245
Pasternak, G. W., see Pick, C. G., 166
Patch clamp
barbiturate anesthetics, depression of resting K$^+$ conductance, myocardium (frog), 358
GABA, receptor-channel complex, characterization, brain (rats), 985
Paul, I. A., see Nowak, G., 1380
Penbutolol, central 5-HT$_1$A and 5-HT$_2$A autoreceptors, blocking properties, penbutolol (rats), 707
Pendley, C. E., Fitzpatrick, L. R., Ewing, R. W., Molino, B. F. and Martin, G. E.: The gastrin/cholecystokinin-B receptor antagonist L-365,260 reduces basal acid secretion and prevents gastrointestinal damage induced by aspirin, ethanol and cysteamine in the rat, 1348
Pentobarbital
barbiturate anesthetics, depression of resting K$^+$ conductance, myocardium (frog), 358
dependence, behavioral effects, sedative drugs (baboons), 47
drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
intracerebroventricular administration, antagonism, morphine-induced antinoicceptive (mice), 1361
Peptides, somatostatin receptors in nucleus
accumbens, locomotor activity (rats), 67
Periaqueductal gray, opioid-induced antinoicceptive, role of neurotensin, nucleus raphe magnus (rats), 580
Perreaut, P., see Cazaubon, C., 826
Perrone, M. H., see Merkel, L. A., 699
Pertussis toxin
differential properties of 5-HT$_1$A receptors, dorsal raphe and hippocampus (rats), 16
short-term desensitization, muscarnic m$_3$ receptors, cerebellar granule cells (mice), 453
Pessary, D., see Berson, A., 366
Petersen, K.-U., see Spraktes, G., 273
pH, gastric mucosal gel thickness, surface cell viability, effect of orogastric nicotine (rats), 948
Phaclofen, GABA autoreceptors, cerebral cortex and spinal cord (rats), 765
Pham, I. Gonzalez, W., El, Fournié-Zaluski, M.-C., Philippe, M., Laboulandie, I., Rouques, B. P. and Michel, J.-B.: Effects of converting enzyme inhibitor and neutral endopeptidase inhibitor on blood pressure and renal function in experimental hypertension, 1339
Ph-leu-Phen-Pro-Gln-Arg-Phe-NH$_2$ amide, analogs, intestinal motility, nociception (rats), 96
Phenacetin, specificity of substrate and inhibitory probes, cytochromes P450 1A1 and 1A2 (humans), 401
Phencyclidine
drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120
metabolite covalent binding, dose- and time-dependent changes, role of CYP2D1 (rats), 1261
Phenobarbital
barbiturate anesthetics, depression of resting K$^+$ conductance, myocardium (frog), 358
geneic obesity and, hepatic conjugation pathways (rats), 1333
Phenyl-2-aminoethyl sulfide, methylated derivatives, oral antihypertensive activity (rats), 1113
Phenylephrine
sensitization of GABA-induced depressions, cerebellar Purkinje neurons, beta adrenergic mechanisms (rats), 426
vasoconstrictor activity in mesenteric vasculature, quinapril (rats), 187
2-Phenylethoxy-9-methyladenine, A$_9$ adenosine receptor discrimination, aorta and coronary vessels (guinea pigs), 248
Phenylethylamines, endothelium- and beta-2 adrenoceptor-independent relaxation, aorta (rats), 1096
Phenyl(4-mino)imidazolidone, octopaminergic agonists, selectivity, octopai-
mine receptor subtypes (fireflies, hornworms), 509

N0-Phenylisopropyladenosine, blood levels, correlation with cardiac responses (guinea pigs), 543

Philip, M. A., see Pham, I., 1339

Phosphodiesterase

CAMP-dependent, block of platelet aggregation, 2-aminochromones (humans), 457

effects of adenosine agonists, ventilation (monkeys), 971

indolodan- and rolipram-sensitive, cardiac microsomal fractions (dogs, humans), 1142

isozymes, functional role, airway smooth muscle (humans), 1213

type III, chimeric molecule, inotropic and beta blocking effects (dogs), 1105

Phospholipase A2, induction of tolerance to crotoxin (mice), 41

Phospholipase C

block of platelet aggregation by 2-aminochromones, inhibition of CAMP-dependent phosphodiesterase (humans), 457

stimulated signal transduction, thromboxane A2, vascular smooth muscle (rats), 447

Phototaffinity labeling, leukotriene generation and metabolism, inhibition of MK-0591 biosynthesis (dogs), 416

Photoreceptors, rod, block of cyclic GMP-activated current, pimozide (frog), 626

Physostigmine

gonist site, nicotinic acetylcholine receptors, hippocampal neurons (rats), 1474

drugs of abuse and cholinergic agents, delayed matching-to-sample responding (monkeys), 120

Pichoff, B. E., Uyehara, C. F. T. and Nakamura, K. T.: Effect of calcium agonists, BAY K 8644 and CGP 28935, on guinea pig airway smooth muscle function during development, 524

Pick, C. G., Nejat, R. J. and Pasternak, G. W.: Independent expression of two pharmacologically distinct supraspinal mu analgesic systems in genetically different mouse strains, 166


Pimozide, block of cyclic GMP-activated current, rod photoreceptors (frog), 626

Pirenzepine, nicotinic anticoniceptive, adrenergic, serotoninergic and cholinergic components (rats), 777

Platelets

block of aggregation by 2-aminochromones, inhibition of CAMP-dependent phosphodiesterase (humans), 457

pulmonary thromboembolism-induced alterations, nitric oxide release, circulating neutrophils (rats), 1369

Polhuis, M., Gasinska, I., Cherry, W. F., Mulder, G. J. and Pang, K. S.: Stereosselectivity in glutathione conjugation and amidase-catalyzed hydrolysis of the 2-bromosoveraloylactam enantiomers in the single-pass perfused rat liver, 1406


Polosa, C., see Backman, S. B., 194

Polymamines

mechanism of putrescine transport, pulmonary artery endothelial cells (human), 60

modulatory sites of NMDA receptors, prevention of glutamate cytotoxicity, ifenprodil (rats), 1017

Pompon, D., see Berton, A., 366

Pontecorvo, M. J., see Clissold, D. B., 876

Poncet, M. J., see Karbon, E. W., 866

Poon, C. L., see Wang, Y.-X., 112

Porreca, F., see Horan, P. J., 896, 1446

Portoghese, P. S., see Miyamoto, Y., 1325

Portoghese, P. S., see Negus, S. S., 1245

Potassium conductance, depression with barbiturate anesthetics, myocardium (frog), 359
differential actions of cispalatin, inner medullary collecting ducts, renal proximal tubule (rabbits), 1421

Potassium channel action potential durations, minoxidil sulfated induced shortening, ventricular myocytes (guinea pigs), 1527

A1-selective agonist RG14202 (pigs), 699

A1P-sensitive blocker glibenclamide, no abolishment of preconditioning (rats), 559

cardioprotection with zofenopil, myocardial ischemia (rats), 609

relaxation of coronary arteries, calcitonin gene-related peptide (pigs), 490

blocker glyburide, natriuretic properties (rats), 933

delayed rectifier, inhibition by 2,3-butanedione monoxime, Xenopus oocytes, 1011

differential effects of endothelin, gastric longitudinal and circular smooth muscle (rats), 1413

opener lemakalim, systemic, coronary and regional vascular dynamics (dogs), 1026

Potts, A. A., see Martin, P. L., 201

Poulsen, H. E., see Boesgaard, S., 1239

Prazosin, nicotinic anticoniceptive, adrenergic, serotoninergic and cholinergic components (rats), 777

Preclamol, electrophysiological effects, autoreceptor-selective dopamine agonists, A10 dopamine neurons (rats), 963

Preconditioning, ATP-sensitive potassium channel blocker, glibenclamide, ischaemic heart (rats), 559

Price, W. A., Jr., see Wong, P. C., 1088

Prisco, S., Cagnotto, A., Talone, D., De Blasi, A., Bennini, T. and Esposito, E.: Tertatolol, a new beta-blocker, is a serotonin (5-hydroxytryptamine1a) receptor antagonist in rat brain, 739

Procainamide ethambromide, hepatobiliary excretory function, chronic physical activity (rats), 321

Progestosterone, mifepristone and, responses to oxytocin, circular myometrium (rats), 1205

Propidium iodide, gastric mucosal gel thickness, surface cell viability and pH, effect of orogastric nicotine (rats), 948

Propranolol

nicotinic anticoniceptive, adrenergic, serotoninergic and cholinergic components (rats), 777

plasma concentration, beta-blockade, dosing rate-dependent relationship (humans), 681

prejunctional beta adrenergic, sympathetic neurotransmission, mesentry (rats), 657

4-Propyl-9-hydroxynaphthoxazine, modification of behavioral effects, dopamine antagonists (monkeys), 1039

Prostaglandin, differential regulation of synthesis, angiotensin peptides, aortic smooth muscle cells (pigs), 694

Proton, permeation, gastric mucosal gel thickness, effect of orogastric nicotine (rats), 948

Proximal tubules

inner medullary collecting duct cells and, differential actions, cispalatin (rabbits), 1421

renal, cell death, extracellular acidosis (rabbits), 1355

Putrescine, mechanism of transport, pulmonary artery endothelial cells (human), 60

Quattrocchi, L. C., see Tassaneeyakul, W., 401

Quinapril, vasococontractor activity, mesenteric vasculature (rats), 187

Quinulindiluv benzilate, mu opiate receptor, up-regulation by morphine, down-regulation by naltrexone in neuroblastoma cells (humans), 254

Radioimmunoaingaging, radiolabeled deferroxamine-biotin derivatives, plasma stability and pharmacokinetics, 408

Raiteri, M., see Bonanno, G., 765

Ram, P. A., see Shapiro, B. H., 979

Rame, D., Anderson, B., Rapen-Pryor, V., Li, T. and Dage, R. C.: Comparison of the in vitro and in vivo cardiovascular effects of two structurally distinct Ca2+ channel activators, BAY K 8644 and FPL 64176, 1125

Rapen-Pryor, V., see Ram, D., 1125

Ravindranath, V., see Shivakumar, B. R., 1137

Raynor, K., Lucki, I. and Reisine, T.: Somatostatin receptors in the nucleus accumbens selectively mediate
the stimulatory effect of somatostatin on locomotor activity in rats, 67
Razdan, R. K., see Compton, D. R., 218
Receptors
μ-δ complex, antinociceptive profile, bilateral (mice), 1446
adrenosine A1, 1562
agonist N-0840, pharmacological characterization, 227
N-0861 and its enantiomers (guinea pigs), 201
adrenosine A2, discrimination in aorta and coronary vessels, 2-phenylethyl-9-methyladenine (guinea pigs), 248
angiotensin II, antagonist SR 47436, pharmacological characterization (rats, dogs, monkeys), 826
benzodiazipine, ligands, hepatic encephalopathy (rats), 565
binding and in vivo activity, cannabinoid structure-activity relationships (rats), 218
chimeric kainate/NMDA, expression in Xenopus oocytes, mammalian and amphibian RNA (rats), 910
cholinergic, microdialysis, 1,2,3,4-tetrahydroaminoacridine (rats), 759
dopamine, autoreceptor-selective dopamine agonists, electrophysiological effects (rats), 963
dopamine D1 and D2, agonist potency and efficacy, MPTP-induced hemiparkinsonian monkeys, 1387
motivational effects of opioids, neurochemical substrates (rats), 53
occupation, antipsychotic drugs (rats), 498
GABA, autoreceptors, cerebral cortex and spinal cord (rats), 765
GABAergic influence of estrus cycle, neurosteroid potency (rats), 1374
neurochemical actions, inhalational anesthetics (mice), 1392
GABAergic, channel complex, characterization, brain (rats), 985
GABAergic, muscarinic m2 receptors, cerebellar granule cells (rats), 433
gastrin/cholecystokinin-B, antagonist L-365,260, prevention of gastrointestinal damage (rats), 1348
5-HT1 agonists, neuronal circuits in discriminative stimulus effects (rats), 572
serotonin-facilitated dopamine release (rats), 373
5-HT1A, effect of sipoperone, dorsal raphe and hippocampus (rats), 7
pertussis and cholera toxins, dorsal raphe and hippocampus (rats), 16
5-HT1A and 5-HT1B, modulation, spinal nociceptive transmission (mice), 378
5-HT1B, occupation, antipsychotic drugs (rats), 498
pharmacology, species differences (rats), 1272
stress, periventricular hypophysyal dopaminergic neurons (rats), 303
5-HT1A and 5-HT4, antagonist FK1052, pharmacological characterization (rats, guinea pigs), 752
kainate, activation of nociceptive reflexes (rats), 927
N-methyl-D-aspartate adaptive changes, imipramine and 1-amino cyclopropanecarboxylic acid treatment (mice), 1380
prevention of glutamate cytotoxicity by ifenprodil, cortical neurons (rats), 1017
muscarinic, mechanism of bradycardia, anticholinesterase neostigmine (rats), 194
muscarinic M1, carbachol-induced sodium current, ventricular myocytes (guinea pigs), 641
short-term desensitization, cerebellar granule cells (rats), 433
neurokinin, tachykinins and atropine-resistant motility, colon (guinea pigs), 1224
neurokinin, tachykinin, neurogenic vasoconstriction, nasal mucosa (rats), 36
neuromuscular junction, buffering hypothesis, speed of action of muscle relaxants, 1181
neuropeptide Y, constriction in femoral artery rings, benexazine protection studies (rats), 172
nicotinic acetylcholine agonist site, hippocampal neurons (rats), 1474
diversity, hippocampal neurons (rats), 1455
ganglia-type, neurelastoma clone line (humans), 294
NPC 16377, binding, neurochemical and neuroendocrine profile (rats, mice), 866
tocapamine, subtypes, octopaminergic agonists (fireflies, hornworms), 509
opioid mu, down-regulation by morphine, up-regulation by naloxone in neurelastoma cells (humans), 254
opioid, regulation (mice), 314
opioid delta agonist and antagonist profiles, substituted delorphins (mice), 896
opioid delta-2, acute dependence on morphine (mice), 1325
opioid mu, changes in renal function (rats), 134
cross-tolerance with alpha-2 adrenoceptors, spinal cord (rats), 551
supraspinal analgesic systems, genetically different mouse strains, 166
supraspinal antinociception, N-acetyl beta-endorphin(1-31) and substance P (mice), 835
opioid mu/delta/kappa, effect of antago-
nists, reinforcing effects of heroin (rats), 1245
purinergic P2, human breast tumor cells, 1499
pharmacological characterization, renovascular system (rats), 334
somatostatin, locomotor activity, nucleus accumbens (rats), 67
Reeves, M. L., see Torphy, T. J., 1213
 Reflex, nociceptive, activation, peripheral kainate receptors (rats), 927
Reichart, B., see Schwinger, R. H. G., 346
Reichbaum, M. I., see Pollock, S. H., 1113
Reinhardt-Maelicke, S., see Pereira, E. F. R., 1474
Reisine, T., see Raynor, K., 67
Renfro, J. L., Brown, M. A., Parker, S. L. and Hightower, L. E., Relationship of thermal and chemical tolerance to transepithelial transport by cultured flounder renal epithelium, 992
Renin-angiotensin system, vasoconstrictor activity in mesenteric vasculature, quinapril (rats), 187
Respiration, control of sympathetic nerve activity, naloxone-precipitated morphine withdrawal (rats), 89
RG14202, A1-selective adenosine agonist (pigs), 699
Rice, K. C., see Compton, D. R., 218
Riska, P., see Farina, P. R., 482
Riva, M. A., see Longone, P., 441
Rivera, L. M., see Merkel, L. A., 699
RNA, mammalian and amphibian, chimeric kainate/NMDA receptors, expression in Xenopus oocytes (rats), 910
RNA, messenger, muscarinic m2, carbachol, cerebellar granule cells (rats), 441
Ro 41-1049, monoamine oxidase-A inhibitors, dopamine metabolism, caudatus (rats), 103
Roache, J. D., see Griffiths, R. R., 1163
Robertson, D., see Teeng, C.-J., 1511
Robertson, L. W., see Chaudhary, I. P., 1333
Roccon, see Cazaubon, C., 826
Rocuronium, speed of action, neuromuscular junction binding ca. buffering hypothesis, 1181
Rod, photoreceptors, block of cyclic GMP-activated current, pimozide (frog), 626
Rodeheaver, D. P. and Schnellmann, R. G., Extracellular acidosis ameliorates metabolic-inhibitor-induced and potentiates oxidant-induced cell death in renal proximal tubules, 1355
Rolipram effects of adenosine agonists, ventilation (monkeys), 971
-sensitive cyclic nucleotide phosphodiesterases, cardiac microsomal fractions (dogs, humans), 1142
Romeo, E., see Auta, J., 649
Roppolo, J. R., see Yoshiyama, M., 844
Roques, B. P., see Kalso, E. A., 551
Roques, B. P., see Pham, I., 1339
Rosebrough, S. F., Plasma stability and pharmacokinetics of radiolabeled deferoxamine-biotin derivatives, 408
Rosenzweig-Lipson, S. and Bergman, J., Modification of the behavioral effects of the selective dopamine D2 agonist (+)4-propyl-9-hydroxynaphthoxazine by dopamine antagonists in monkeys, 1039
Rotenone, cell death and extracellular acidosis, renal proximal tubules (rabbits), 1355
Rousseau, E., see Lugnier, C., 1142
Rubidium-86, cromakalim-induced efflux, inhibition by 8-(diethy lamino)octyl-3,4,5-trimethoxybenzoate, aorta (rats), 1399
Rutter, J. J. and Auerbach, S. B., Acute uptake inhibition increases extracell-
lular serotonin in the rat forebrain, 1319


Sadler, V., see Tagari, P., 418

Salazar, L. A., see Cruz, S. L., 1519

Salbutamol, prejunctional beta adrenoceptors, sympathetic neurotransmission, mesentery (rats), 657

Salt, induced hypertension, prevention by losartan, reduced renal mass rats, 1131

Sánchez-Blázquez, P. and Garzón, J.: N-acetyl β-endorphin-(1-31) and substance P regulate the supraspinal antinociception mediated by mu opioid and alpha-2 adrenoceptors but not by delta opioid receptors in the mouse, 835

Sanguinetti, M. C., see Lynch, J. J., Jr., 720

Sarcoplasmatic reticulum, Ca++ ATPase, inhibition of relaxation, nitroglycerin and atrial natriuretic factor (rabbits), 1187

Sargent, C. A., see Grover, G. J., 559


Sasa, M., see Tamura, Y., 1017


Sato, Y., see Tamura, Y., 1017

Sawaki, S., see Furukawa, Y., 901

Schachter, M., see Calder, J. A., 1175

Schindler, C. W., see Vasar, S., 1

Schizophrenia antipsychotic drugs, dopamine D1 and D2, 5-HT2 receptor occupation (rats), 498 electrophysiological effects, autoreceptor-selective dopamine agonists, A10 dopamine neurons (rats), 963

NPC 16377 receptor binding, neurochemical and neuroendocrine profile (rats, mice), 813

Vasoconstrictor activity in mesenteric vasculature, quinapril (rats), 187

Sever, P. S., see Calder, J. A., 1175

Sever, P. S., see Garcha, R. S., 860

Seyama, I., see Yakehiro, M., 1328

Shaffer, J. E., Grizzle, M. K., Anderson, D. K. and Wheeler, T. N.: The inotropic and β2 blockade a effects of a chimeric molecule that putatively inhibits both types II phosphodiesterase and β2 adrenoceptors in anesthetized dogs, 1105

Shapiro, B. H., Pampori, N. A., Ram, P. A. and Waxman, D. J.: Irreversible suppression of growth hormone-dependent cytochrome P450 2C11 in adult rats neonatally treated with monosodium glutamate, 979

Sharp, T., see Hjorth, S., 707

Shaw, L. M., see Kurth, C. D., 587

Shen, Y.-T. and Vatner, S. F.: Effects of a K+ATP channel opener, lemakalim, on systemic, coronary and regional vascular dynamics in conscious dogs: Comparison with nifedipine, adenosine, nitroglycerin, and acetylcholine, 1026

Sheng, J., see Domino, E. F., 1387

Shippenberg, T. S., Bals-Kubik, R. and Herz, A.: Examination of the neurochemical substrates mediating the motivational effects of opioids: Role of the mesolimbic dopamine system and D-1 vs. D-2 dopamine receptors, 53

Shirayama, T., Matsumoto, K. and Pappano, A. J.: Carbachol-induced sodium current in guinea pig ventricular myocytes is not regulated by guanine nucleotides, 641

Shivakumar, B. R. and Ravindranath, V.: Oxidative stress and thiol modification induced by chronic administration of haloperidol, 1137

Shock, bacterial lipopolysaccharide, induction of nitric oxide synthase inhibition by nifedipine (mice), 674

Shryock, J., see Dennis, D. M., 543

Signal transduction inhibition of parietal cell function, epithelial growth factor, TGF-α (rabbits), 398

Thromboxane A2, vascular smooth muscle (rats), 447


SKF-38393, involvement of brain dopamine, behavioral action of MK-801, 6-hydroxydopamine-lesioned rats, 1001

Skolnick, P., see Harris, B., 1392

Skolnick, P., see Nowak, G., 1380

Slaninova, J., see Horan, P. J., 1446

Sleph, P. G., see Grover, G. J., 559

Sleph, P. G., see Sargent, C. A., 609

Sloan, J. W., Martin, W. R. and Wala, E.: Effect of the calcium antagonist dihydropyridine on the intensity and characteristics of the precipitated abstinence syndrome in the dog, 1152

Smallwood, V. V., see Valevay, A. Y., 985

Smith, D. J., see Urban, M. O., 580

Smith, J. E., see Goeders, N. E., 592

Smith, M. A., see Sargent, C. A., 609

Smith, M. P., see Clark, M. A., 933

Smith, R. D., see Wong, P. C., 1088

Smits, G. J., see Merkel, L. A., 699

Snider, R. M., see Piedimonte, G., 36

Sodium, natriuretic properties, glyburide (rats), 933

Sodium channel, structure-function activity relationship, D- ring derivatives, grayanotoxin (squid), 1328

Sodium current, carbachol-induced, ventricular myocytes, guanine nucleotides (guinea pigs), 641

Sodium fluxes, modulators of electrolyte transport, secretin and somatostatin, gallbladder epithelium (guinea pigs), 273

Sodium nitroprusside, endothelin-dependent relaxation of aorta, l - and d-enantiomers, N5-nitro-arginine (rats), 112

Sodium-potassium adenosine triphosphatase, differential actions of cispapatin, inner medullary collecting ducts, renal proximal tubule (rabbits), 1421


Somatostatin, secretin and modulators of electrolyte transport, gallbladder epithelium (guinea pigs), 273

Someya, K., see Takahashi, H., 681

Sontag, D., see Pierce, G. N., 1280
in nitric oxide release, circulating neutrophils (rats), 1369
Thromboxane A2, stimulated signal transduction, vascular smooth muscle (rats), 447
Thymocytes, subpopulations, morphine-induced alterations (mice), 81
Timmermans, P. B. M. W. M., see Wong, P. C., 1088
Timolol, sensitization of GABA-induced depressions, cerebellar Purkinje neurons, beta adrenergic mechanisms and ethanol (rats), 426
Tirapazamine, pharmacokinetics and bioreductive metabolism (mice), 938
Tokoro, K., see Nakagura, Y., 752
Tolerance, induction of, crotoxin (mice), 41
Tomoi, M., see Nakagura, Y., 752
Tong, C., see Detweiler, D. J., 536
Transforming growth factor-alpha, epidermal growth factor and inhibition of pial arteriolar cell function (rabbits), 308
Trichloroethanol, potentiation of 5-HT3 receptor-mediated current, nodose ganglion neurons (rats), 771
2,4,6-Triethylphenyl-(iminio)imidazolizine, 2,4,6-triethylphenyl-(iminio) imidazolizine and, octopaminergic agonists, octopamine receptor subtypes (fireflies, hornworms), 509
Trifluoperazine, mitochondrial and glycolytic dysfunction, lethal injury to hypotyces (rats), 392
2,4,5-Trihydroxyamphetamine, 2,4,5-trihydroxyamphetamine and, central trophoblast hyaluridinease activity (rats), 813
Troconiz, I. F., see Schwartz, J. B., 690
Trullas, R., see Nowak, G., 1380
Tryptamines, species differences in pharmacology, 5-HT7 receptor (rats), 1272
Tryptophan hydrolase, central activity, short-term effects, MDMA metabolites (rats), 813
Tsuchuki, K., see Im, H. K., 529
D-Tubocurarine, speed of action, neuromuscular junction blocking via, buffering hypothesis, 1181
Tukey, R. H., see Tassaneeyakul, W., 401
Tuntaterdtum, S., see Chaudhary, I. F., 1333
Turski, L., see Steppuhn, K. G., 1063
Tyramine, endothelin- and beta-2 adrenoceptor-independent relaxation, aorta (rats), 1096
U-50,488H, medullary hyperalgesic center, pharmacological characteristics (rats), 286
U-88,779E, block of transient calcium channel current, neuroblastoma cells (mice), 529
Ueda, I., see Imaizumi, T., 328
Ueda, M., see Gemb, T., 463
Uedea, M., see Martin, P. L., 248
UL-FS 49, increased atrial force and decreased ventricular force, heart preparations (dogs), 801
Undem, B. J., see Torphy, T. J., 1213
Urban, M. O. and Smith, D. J.: Role of neurotensin in the nucleus raphe magnus in opioid-induced antinociception from the periaqueductal gray, 590
Urethra, external sphincter, involvement of nitric oxide, inhibitory control (rats), 713
Usherwood, P. N. R., see Brackley, P. T. H., 910
Uyebara, C. T. F., see Pichoff, B. E., 524
Vagus nerve, serotonin microinjection into nucleus raphe obscurus, increased intragastric pressure (rats), 468
Valentine, J. L., see Owens, S. M., 1261
Valeyev, A. Y., Barker, J. L., Crucciani, R. A., Lange, G. D., Smallwood, V. V. and Mahan, L. C.: Characterization of the y-aminobutyric acid, receptor-channel complex composed of o2 and o3 subunits from rat brain, 985
Van der Gaag, L. H., see Lynch, J. J., 720
Vandermeersch, S., see Chansel, D., 1534
Van Dyke, R. A., see Sill, J. C., 74
Vane, J. R., see Szabo, C., 674
Van Rijn, H. J. M., see Bijlenga, J. A., 1267
Vascular permeability, tissue injury, inhibition of vascular leakage, neurotensin peptides (rats), 619
Vascular resistance, comparison of vasodilators, lemakalim (dogs), 1026
Vasculature mesenteric, vasoconstrictor activity, quinapril (rats), 187
sympathetic vasomotor control, postjunctural role, neuropeptide Y (rabbits), 887
Vas deferens electrically induced contractile responses, inhibition of purinergic component, atrial natriuretic peptide (guinea pigs), 920
Vesmolar, neuromodulatory effects of angiotensin, angiotensin receptors (rabbits), 601
Vasoconstrictral functional characterization, alpha adrenergceptors, intrarenal arteries (rabbits), 807
quinapril, activity in mesenteric vasculature (rats), 187
vascular postsynaptic neuropeptide Y receptor function (rats), 172
Vasoconstriction antiproliferative and endothelin-dependent, 1,3-dihydro-3-p-chlorophenyl-7-hydroxy-6-methyl-furo-(3, 4c) pyridine hydrochloride (rats), 50
Al-selective agonist RG11202 (pigs), 699
neurogenic neurokinin, tachykinin receptors, nasal mucosa (rats), 36
role of nitric oxide, cerebral artery (pig), 339
Vasopressin, attenuation of Ca++ mobilization, isoflurane, vascular smooth muscle cells, 74
Vasorelaxation, ion channel involvement, acute vascular effects, thiazide diuretics (guinea pigs), 1175
Vatner, S. F., see Shen, Y.-T., 1026
Vereurocin, speed of action, neuromuscular junction binding vs. buffering hypothesis, 911
Venkova, K. M., see Mutafova-Yambolieva, V. N., 920
Ventilation, effects of adenosine agonists (monkeys), 971
Ventral striatum, induction of feeding, opioid stimulation (rats), 1253
Ventral tegmental area, electrophysiological effects, autoreceptor-selective dopamine agonists, A10 dopamine neurons (rats), 963
Ventricle, decreased force, increased atrial force, UL-FS 49 (dogs), 801
Verapamil, action of amloidrine, subcutaneous resistance arteries (humans), 860
selective pharmacokinetics and pharmacodynamics, aging effects (humans), 690
Veronese, M. E., see Tassaneeyakul, W., 401
Verotta, D., see Schwartz, J. B., 690
Vershoyie, R. D., Dinadale, D. and Wolf, C. R.: Inhibition and induction of cytochrome P450 isoenzymes in rat lung, 386
Vickers, P., see Tagari, P., 416
Vidal, J. C., see Okamoto, M., 41
Villarreal, J. E., see Cruz, S. L., 128, 1519
Viakas, L. J., see Okamoto, M., 41
Voltage clamp barbiturate anesthetics, depression of resting K+ conductance, myocardium (frog), 358
Chimeric kinase/NMDA receptors, expression in Xenopus oocytes, mammalian and amphibian RNA (rats), 910
Wainscott, D. B., see Nelson, D. L., 1272
Wala, E., see Sloan, J. W., 1152
Wallace, A. A., see Lynch, J. J., J., 720
Walton, M. I. and Workman, P.: Pharmacokinetics and bioreductive metabolism of the novel benzothiazine di-N-oxide hypoxic cell cytotoxic tirapazamine (WIN 50639, SR 4235, NSC 130181) in mice, 938
Waltzing syndrome, region-dependent damage to central nervous system, levels above brain stem, 3,3'-iminodipropionitrile (rats), 1492
Wang, L., Lucey, M. R., Fras, A. M., Wilson, E. J. and Del Valle, J.: Epidermal growth factor and transforming growth factor-a directly inhibit purinergic cell function through a similar mechanism, 183
Wang, Y.-X., Poon, C. I. and Pang, C. C. Y.: In vitro and ex vivo inhibitory effects of L and D-enantiomers of N-
nitro-arginine on endothelium-dependent relaxation of rat aorta, 112
Wang, Y.-X. and Pang, C. C. Y.: Functional integrity of the central and sympathetic nervous systems is a prerequisite for pressor and tachycardic effects of diphenylethiondiamine, a novel inhibitor of nitric oxide synthase, 263
Watanabe, K., see Horie, S., 1313
Watkins, J. B., III, see Yiamouyiannis, C. A., 321
Watts, V. J., see Lysle, D. T., 1071
Waxman, D. J., see Shapiro, B. H., 979
Weber, S., see Horan, P. J., 1446
Weber, S. J., see Horan, P. J., 896
Wegner, C. D., see Farina, P. R., 483
Wei, E. T., see Gao, G. C., 619
Weiniger, M. B., see Negus, S. S., 1245
Welch, S. P.: Blockade of cannabinoid-induced antinociception by norbinaltorphimine, but not N,N-diallyltirosine-aib-phenylalanine-leucine ICI 174,864 or naloxone in mice, 653
Wenger, G. R., see Hudzik, T. J., 120
Weizler, R. R., see Wong, P. C., 1088
Wheeler, T. N., see Shaffer, J. E., 1105
White, D. A., see Fleming, N. W., 1199
White, F. J., see Ackerman, J. M., 963
Wienetjes, M. G., see Bramer, S. L., 731
Wilcox, G. L., see Alhaider, A. A., 378
Wild, K. D., see Horan, P. J., 896
Wilson, E. J., see Wang, L., 308
Winer, N., see El Alj, A., 1205
Wishka, D. G., see Benjamin, C. W., 457
Wojcik, W. J., see Conterra, J. G., 433
Wojcik, W. J., see Longone, P., 441
Wolf, C., see Berson, A., 366
Wolf, C. R., see Verschoyle, R. D., 386
Wong, G., see Harris, B., 1392
Workman, P., see Walton, M. L., 938
Wyche, J. H., see Han, Z., 790
XB513, pharmacology (rats), 1088
Xenopsin, inhibition of vascular leakage, tissue injury (rats), 619
Xiao, W.-B., Nordberg, A. and Zhang, X.: Effect of in vivo microdialysis of 1,2,3,4-tetrahydro-9-aminocadine (THA) on the extracellular concentration of acetylcholine in the striatum of anesthetized rats, 759
Xu, J., see Conterra, J. G., 433
Xue, H., see Bukoski, R. D., 30
Yamamoto, S., see Yakehiro, M., 1328
Yamamura, H. I., see Horan, P. J., 896, 1446
Yamashita, I., see Matsubara, S., 498
Yanagisawa, T., see Kageyama, M., 490
Yano, S., see Horie, S., 1313
Yasuda, K., see Sathirakul, K., 1301
Yiamouyiannis, C. A., Martin, B. J. and Watkins, J. B., III: Chronic physical activity alters hepatobiliary excretory function in rats, 321
Yoburn, B. C., Billings, B. and Duttaroy, A.: Opioid receptor regulation in mice, 314
Yokota, T., see Tamura, Y., 1017
Young, M. B., see Lynch, J. J., Jr., 720
Zacopride, nicotinic antinociception, adrenergic, serotoninergic and cholinergic components (rats), 777
Zadina, J. E., Chang, S. L., Ge, L.-J. and Kastin, A. J.: Mu opiate receptor down-regulation by morphine and up-regulation by naloxone in SH-SYSY human neuroblastoma cells, 254
Zajac, J. M., see Million, M., 96
Zeidel, M. L., see Brady, H. R., 1421
Zhang, X., see Xiao, W.-B., 759
Zhou, Q., see Loving, D. M., 771
Zinc, thermal and chemical tolerance, trans-epithelial transport, renal epithelium (flounder), 992
Zingaro, G. J., see Lynch, J. J., Jr., 720
Zofenopril, cardioprotection, myocardial ischemia, ATP-sensitive potassium channel (rats), 609