

# VOLUME 32 1989

## SUBJECT INDEX

- A<sub>2</sub> receptors**, 203  
**Abstinence syndrome**, 671  
**Abuse**, 283  
**Acetylcholine**, 707, 841  
**Acetylcholinesterase**, 867  
**ACh levels**, 1075  
**ACTH**, 475, 557  
**Active avoidance**, 317  
**Active shock avoidance**, 533  
**Activity**, 77  
**Adenosine**, 181, 459, 487  
**Adenylate cyclase**, 533  
**Adrenal activity**, 913  
 **$\alpha_2$ -Adrenoceptor-stimulated feeding**, 391  
 **$\beta_2$ -Adrenoceptor antagonist**, 187  
 **$\alpha_2$ -Adrenoceptors**, 749  
 **$\beta$ -Adrenoceptors**, 533  
**Adult offspring behavior**, 323  
**Age effects**, 361  
**Aggression**, 867, 919  
**Aggressive mice**, 111  
**Agonist activity**, 939  
**Alcohol**, 293, 667  
**Alcohol consumption**, 1061  
**Alcohol-preferring and -nonpreferring rats**, 1061  
**Alesthesia**, 117  
**Alpha-1-acid glycoprotein**, 1043  
**Alpha-1 adrenoceptors**, 927  
**Alpha-2 adrenoceptor agonists**, 927  
**Alpha-2 adrenoceptor antagonists**, 927  
**Alpha-2 adrenoceptors**, 927  
**Alpha-adrenoreceptor**, 831  
**Alpha- and beta-receptors**, 133  
**Alpha-flupentixol and spatial navigation**, 211  
**Alternation task**, 49  
**Alternation test**, 283  
**Alzheimer's disease**, 841  
**Amfonelic acid**, 977, 983  
**2-Amino-7-phosphonoheptanoic acid**, 733  
**Amiodarone**, 87  
**Amnesia**, 187, 787, 873  
**Amphetamine**, 71, 147, 355, 361, 577, 581, 683, 723, 769, 1017  
**d-Amphetamine**, 55, 65, 241, 249, 447, 711, 857  
**Analgesia**, 505, 613, 661, 717, 727, 897, 939, 961  
**Animal newborn**, 1067  
**Anisomycin**, 867, 873, 1003  
**Anorexia**, 147, 275, 819  
**Antagonist**, 933  
**Antagonist activity**, 939  
**Anticonvulsant activity**, 27  
**Anticonvulsants**, 595, 733, 823  
**Antidepressant properties**, 111  
**Antinociception**, 657  
**Anxiety**, 151, 181, 801, 807, 919  
**Anxiety model**, 777  
**Anxiogenic-like effect**, 259  
**Anxiolytic method**, 773  
**Anxiolytic-like effect**, 259  
**Anxiolytics**, 331, 807  
**Apomorphine**, 43, 71, 77, 141, 151, 249, 533, 589, 651, 723, 815  
**Appetite**, 769  
**Arcuate nucleus**, 391  
**Area postrema**, 1033  
**Arousal**, 919  
**Aspartame**, 17  
**Atenolol**, 807  
**Atropine**, 309, 495, 867, 1075  
**Atropine methyl nitrate**, 971  
**Atropine sulfate**, 175, 971  
**Attention**, 399  
**Aversion**, 431  
**Aversive and nonaversive tasks**, 885  
**Aversive environmental stimuli**, 857  
**Avoidance**, 677  
**Azaprophen**, 495  
  
**BAER**, 757  
**Barbiturates**, 897  
**Barrel rotation**, 629  
**Behavior**, 27, 885  
**Behavioral tolerance**, 267, 283  
**Behavioral toxicity**, 819  
**Behavioral toxicology**, 17  
**Benzodiazepine**, 181, 613, 743, 801, 823, 901  
**Benzodiazepine inverse agonist**, 163  
**Benzodiazepine receptor**, 667  
**Benzodiazepine receptor antagonists**, 671, 901  
**Benzodiazepine-methylxanthine interaction**, 773  
**Beta-alanine**, 505  
**Beta-carbolines**, 27  
**B-HT 920**, 815  
**Bicuculline**, 357, 563  
**Blood ethanol levels**, 431  
**BMY-14,802**, 87  
**Body weight**, 1025  
**Brain regions**, 791  
**Brain-stimulation reward**, 977, 983  
**Brown adipose tissue**, 301  
**Buffer**, 831  
***Bufo regularis***, 83  
**Buspirone**, 87, 227, 259, 1049  
  
**C57BL**, 241  
**Caffeine**, 181, 399, 459, 773, 1017  
**Calcium antagonist**, 595  
**Cat**, 207, 459, 519, 671, 861  
**Catalepsy**, 621, 661, 717  
**Catch-up growth**, 957  
**Catecholamines**, 9, 629  
**CD-1**, 241  
**Central and peripheral benzodiazepine receptors modulation**, 879  
**Cerebellum**, 827  
**Cerebral cortex**, 827, 831  
**Cerebral laterality**, 293  
**Cerebral lateralization**, 425  
**Cerebrospinal fluid (CSF)**, 227  
**CF-1**, 241  
**CGS 8216**, 671  
**CH-38083**, 927  
**Chemoconvulsions**, 233  
**Chick**, 187  
  
**Chicken**, 377  
**Chloramphenicol**, 867  
**Chlordiazepoxide**, 123, 743, 801  
**Chloro-2(1-piperazinyl)pyrazine (MK-212)**, 657  
**p-Chlorophenylalanine**, 815  
**Chlorophenylpiperazine (mCPP)**, 657  
**Cholinergic**, 495  
**Cholinergic hypofunction**, 841  
**Cholinergic system**, 787  
**Chronic administration**, 227  
**Chronic naltrexone**, 727  
**Chronic neuroleptics**, 1057  
**Chronic stress**, 737  
**Chronic treatment**, 1075  
**Cigarette smoking**, 677  
**Circadian**, 1043  
**Circadian clock**, 901  
**Circadian rhythm**, 475, 491  
**Circling**, 849  
**Cisplatin**, 207  
**Clonazepam**, 367, 773  
**Clonidine**, 133, 151, 383, 749  
**Cocaine**, 71, 267, 447, 463, 527, 691, 857, 1017  
**Cognitive performance**, 399  
**Colchicine**, 301  
**Cold**, 1025  
**Concurrent schedules**, 347  
**Conditional discriminations**, 439  
**Conditioned fear**, 469  
**Conditioned place aversion**, 355  
**Conditioned place preference**, 355  
**Conditioned saccharin aversion**, 819  
**Conditioned stereotypy**, 249  
**Conditioned suppression**, 807  
**Conditioned Suppression of Drinking (CSD)**, 801  
**Conditioned taste aversions**, 1, 17, 1033  
**Conditioning**, 581  
**Conflict**, 1025  
**Conflict behavior**, 801, 807  
**Continuous reinforcement**, 55, 65  
**Convulsions**, 367  
**Copulatory pelvic thrusting**, 169  
**Core temperature**, 331  
**Corpus striatum**, 425  
**Cortico-striatal pathway**, 337  
**Corticosterone**, 37, 557  
**Corticotropin releasing factor**, 197  
**Corticotropin-releasing hormone**, 919  
**Cortisol**, 9  
**Cough reflex**, 357  
**m-CPP**, 37  
**CRF**, 967  
**CRF antagonist**, 197  
**Cross-sensitization**, 581  
**Cumulative food intake**, 147  
**Cycloheximide**, 787  
**Cyclohexyladenosine (CHA)**, 487  
**Cyclopentyladenosine (CPA)**, 487  
**Cyproheptadine**, 415, 585  
**Cysteamine**, 629  
  
**D1**, 691, 1033

- D1 and D2 dopamine receptors, 141  
D-1/D-2 receptors, 203  
D2, 691, 1033  
DAGO, 469  
DBA, 241  
p,p'-DDT, 993  
Decortication and neuroleptics, 211  
Deer mouse, 613  
Delayed matching-to-sample, 439  
Delta-receptor, 469  
Denervation supersensitivity, 337  
Depressants, 283  
Depression, 737, 913, 927  
Deprivation, 383  
Desipramine, 533, 967  
Dexfenfluramine, 1025  
Dextrofenfluramine, 573  
DFP, 867  
5,7 DHT, 993  
Diazepam, 27, 367, 479, 613, 671, 807  
Differential-reinforcement-of-low-rate, 643  
Dihydroergosine, 111  
Discrimination, 971  
Discrimination accuracy, 707  
Discriminative stimulus, 711  
Dopamine, 43, 95, 221, 249, 337, 553, 621, 945, 949, 977, 993, 1033, 1049, 1067  
Dopamine D<sub>2</sub> receptors, 447, 815  
Dopamine receptors, 691, 717  
Dopamine release, 71  
Dopamine turnover, 425  
Dopaminergic sites, 151  
Dorsal raphe, 625  
Dose, 1009  
Dose-response, 361  
Double blind, 1065  
DPDPE, 469  
Drinking, 415  
Drive, 1025  
DRL schedule of reinforcement, 967  
Drug concentration, 347  
Drug discrimination, 87, 361, 607, 1017  
Drug discrimination learning, 1  
Drug interactions, 309, 479, 711, 807, 1017  
Drug reinforcement, 347  
Drug self-administration, 347  
Drug-adulterated food, 891  
Dyskinesia, 505  
  
Eating time, 133  
EEG, 987  
EEG activity, 861  
EEG spectral analysis, 27  
EKG, 83  
Electrodermal activity, 9  
Electromyography, 9  
Emesis, 207  
Endogenous modulator, 1043  
Endogenous opiate system, 737  
Endogenous opioids, 469  
Environment-specificity, 581  
Environmentally-induced analgesia, 961  
Epileptic seizures, 405  
Ethanol, 233, 361, 533, 1071  
Ethanol self-administration, 431  
Ethanol sensitivity, 827  
Ethanol withdrawal, 163  
Ethanolamine-O-sulfate, 275  
Ethylcholine mustard aziridinium, 841  
Eticlopride, 717  
Evolutionary origin of central reward mechanism, 355  
  
Excitatory amino acids, 337, 733  
Exploration, 853  
Exploratory behavior, 487  
Extinction, 65  
  
Fasting, 101  
Fear and/or anxiety, 569  
Feed refusal, 819  
Feeding, 133, 275, 415, 769, 907  
Feeding rate, 133  
d-Fenfluramine, 411  
FEP, 757  
Fetal Alcohol Syndrome, 283  
FG-7142, 233, 671  
Fixed interval, 267  
Fixed-consecutive-number, 439  
Fixed-interval performance, 643  
Fixed-interval schedule, 479  
Fixed-ratio, 643  
Fixed-ratio schedule, 347  
Flash evoked potentials, 511  
Fluphenazine, 71, 1057  
Flurazepam, 87  
Food deprivation, 347  
Food intake, 367, 483, 573  
Food motivation, 1025  
Food restriction, 957  
Food satiation, 347  
Force-proportional reinforcement, 499  
Formalin test, 469  
FSH, 157  
  
GABA, 111, 275, 357, 505, 563, 625, 667, 849, 1067  
GABA agonists, 879  
GABA and glycine antagonists, 169  
GABA-transaminase, 275  
Genital grooming, 853  
Gepirone, 259, 1049  
Glucose, 553  
Glutamate, 621  
Glutamate receptors, 337  
Glutamic acid, 733  
Glutamic acid diethyl ester, 733  
Glycine, 505, 993  
Goldfish, 355  
Gonadotropins, 157  
Grooming, 853  
Growth hormone, 37  
Guinea pigs, 421, 1057  
  
H<sub>1</sub>-antagonists, 861  
[<sup>3</sup>H]Dopamine synaptosomal uptake, 699  
Habenula nucleus, 77  
Haloperidol, 87, 95, 589, 621, 683, 967, 1033  
Hamsters, 589  
Head twitch behavior, 585  
Heart rate, 9, 83  
Heroin, 527, 1009  
Hippocampectomy and neuroleptics, 211  
Hippocampus, 95  
Homotaurine, 607  
Hooded rats, 511  
[<sup>3</sup>H]PCP binding, 699  
HPLC, 1071  
5-HT, 111  
5-HT<sub>3</sub> antagonists, 207  
5-HT<sub>1A</sub> receptor, 259, 491, 1049  
5-HT-1B receptor, 491  
Humans, 117, 483, 677  
Hunger, 117  
  
6-Hydroxydopamine, 43, 577  
5-Hydroxytryptamine, 317, 797, 907  
Hyperactivity, 577, 823  
Hyperalgesia, 961  
Hyperlocation, 835  
Hyperlocomotion, 835  
Hyperprolinemia, 885  
Hyperreactivity, 637  
Hypothalamic nuclei, 101  
Hypothalamo-pituitary-adrenal axis, 323  
Hypothalamus, 101, 411, 629  
Hypothermia, 141, 511, 533, 661  
  
ICI 118,551, 187  
Idazoxan, 749  
Iminodipropionitrile, 1003  
Imipramine, 37, 737  
Immobilization, 1071  
Immune function, 913  
Incentive, 1025  
Ingestive behavior, 117  
Inhalation, 987  
Inhibition, 637  
Inhibitory avoidance, 563  
Inositol 1,4,5-trisphosphate, 827  
Insomnia, 1065  
Insulin, 553  
Intertrial interval, 55  
Intoxication, 667  
Intracortical AF64A, 841  
Intrathecal, 505  
Intrathecal treatments, 169  
Intravenous self-administration, 1009  
Ion, 841  
Ipsapirone, 259, 1049  
Island-mainland populations, 613  
Isobogram, 1017  
Isolation, 637  
Isolation distress, 197  
  
Kappa-receptor, 469  
Ketamine, 405, 511  
Keypeck, 267  
Kindling, 463  
  
L-5-HTP, 259  
LH, 157  
Large neutral amino acids, 17  
Latency to feed, 147  
Latent inhibition, 123  
Lateral hypothalamus, 275  
Learning, 495  
Learning/memory, 841  
Lesion, 275  
Lesions, dorsomedial hypothalamic nucleus, 957  
Lever-pressing, 309  
Lidocaine, 463  
Lindane, 367  
Lithium, 453  
Locomotion, 853  
Locomotor activity, 129, 221, 487, 581, 625, 683, 901, 1003  
Long sleep and short sleep mice, 827  
Long-term, 37  
Long-term memory, 873  
Loratadine, 861  
Lordosis, 421  
LSD, 191  
Luteinizing hormone releasing hormone (LHRH), 853  
LY 171555, 95, 1033

- Male and female rats, 707  
 Male rats, 1071  
 Marijuana, 483  
 Mating behavior, 377  
 Mazindol, 71  
 Mecamylamine, 933  
 16-Me cyprenorphine (Rx 8008M), 469  
 Median raphe, 625  
 Melatonin, 157  
 Memory, 495, 749, 971  
 Memory consolidation, 563  
 Mental stress, 9  
 Meperidine, 87  
 Mescaline, 191  
 Met-enkephalin, 791  
 Metergoline, 601  
 Methadone, 643  
 3-Methoxytyramine, 553  
 Methylatropine, 175  
 3,4-Methylenedioxymethamphetamine (MDMA), 835  
 Methysergide, 657, 787  
 Metrazol, 405  
 MHPG-SO<sub>4</sub>, 369, 791  
 Mice, 487, 563, 727, 787  
 Microsomal flavin-containing monooxygenase, 87  
 Midazolam, 901  
 MIF-1, 737  
 Milacemide, 993  
 Mitochondria, 873  
 MK-801, 595, 621  
 Molindone, 439  
 Monkeys, 607  
 Monoamine, 1049  
 Monoamine metabolite, 1049  
 Monosodium L-glutamate, 391  
 Montgomery's conflict test, 259  
 Morphine, 129, 241, 519, 581, 589, 683, 717, 939, 961, 983  
 Motion sickness, 207  
 Motor activity, 241, 797  
 Motor behavior, 919  
 Motor impairment, 733  
 Mouse, 667, 777  
 Mouse motility, 1075  
 Mouse strains, 241  
 Mouse-killer rats, 111  
 MR/Har and MNRA/Har Maudsley rat strains, 801  
 Mu-receptor, 469  
 Multiple schedule, 267  
 Muscarinic receptors, 543  
 Muscimol, 563, 625, 897  
 Mycotoxins, 819  
 Myocardial sensitivity, 475  
 Myoclonus, 993  
*Myristica fragrans*, 83
- N-0437, 447  
 N-[1-(2-benzo(b)thiophenyl)cyclohexyl]piperidine (BTCP), 699  
 NaCl intake, 773  
 N-allylnormetazocine, 711  
 Naloxone, 511, 563, 589, 613, 737, 961, 977  
 Naltrexone, 563, 651, 683  
 Natural killer cells, 913  
 N-dealkylation, 87  
 Neonatal brain endocrine ontogenesis, 323  
 Neonate, 453  
 N-ethoxycarbonyl-2-ethoxy-1,2-dihydro-
- quinoline, 141  
 N-ethylcarboxamidoadenosine (NECA), 487  
 Neural change, 249  
 Neurochemical asymmetry, 425  
 Neurochemistry, 227  
 Neuroendocrinology, 913  
 Neuroleptics, 337, 439, 499  
 Neuroleptics and extinction, 211  
 Neuroleptics and spatial navigation, 211  
 Neuronal uptake, 475  
 Neuropeptide Y, 391  
 Neuropharmacology of feeding, 391  
 Nicotine, 221, 479, 677, 857, 933  
 Nicotine blood level, 677  
 Nicotine gum, 677  
 Nimodipine, 595  
 Nisoxetine, 983  
 NMDA, 621  
 NMDA receptor antagonist, 595  
 NMDA receptors, 405  
 N-n-propylmorphine, 141  
 Nociception, 601  
 Nonaggressive, 867  
 Nonbenzodiazepine anxiolytics, 1049  
 Noradrenaline, 133  
 Noradrenaline metabolism, 569  
 Noradrenaline release, 791  
 Noradrenergic, 181  
 Noradrenergic sites, 151  
 Noradrenergic system, 421  
 Norepinephrine, 101, 475, 1049  
 Novelty, 683  
 Nucleus accumbens, 577, 769  
 Nucleus basalis, 841  
 Nutmeg, 83
- Ochratoxin A, 819  
 Off-baseline conditioned suppression, 123  
 11-OH- $\Delta^8$ -THC-DMH, 661  
 8-OH-DPAT, 227, 259, 573, 797  
 Olfactory tubercle, 577  
 One-trial passive avoidance learning, 187  
 Ontogenetic, 405  
 Open field, 533, 629, 737, 797  
 Operant behavior, 49, 949  
 Operant conditioning, 495  
 Opiates, 939, 961  
 Opioid, 961  
 Opioid antagonists, 563  
 Opioid system, 117  
 Opioid-dopamine interactions, 717  
 Opioids and feeding, 391  
 Oral route, 347  
 Organophosphonates, 49  
 Overdose, 365  
 Overfeeding, 101  
 Oxymorphone, 939  
 Oxymorphone-6-spirohydantoin, 939
- Pain, 505, 601, 657  
 Pain thresholds, 939  
 Palatability, 1025  
 Pantethine, 629  
 Para-ventricular hypothalamus, 133  
 Paraventricular nucleus, 907  
 Partial reinforcement, 55, 65  
 Pavlovian conditioning, 365, 469  
 Pentobarbital, 347, 355, 357, 365, 711, 891  
 Pentothen, 897  
 Periaqueductal gray substance, 853  
*Peromyscus maniculatus*, 613  
 Pharmacological conditioning, 249
- Phase shift, 901  
 Phase-response curve, 901  
 Phencyclidine, 1, 87, 711  
 Phencyclidine (PCP) and derivatives, 699  
 Phenobarbital, 807, 891  
 2-(Phenylamine) adenosine (CV-1808), 487  
 Phenylpropanolamine, 147  
 Phenytion, 367  
 Physical dependence, 1009  
 Physical exercise, 573  
 Physostigmine, 309, 511  
 Picrotoxin, 357, 563  
 Pigeons, 227, 267, 415, 439, 607, 643, 711  
 Pimozone, 249, 499, 527, 691, 949  
 Piribedil, 815  
 Pituitary cyclic AMP, 557  
 Place conditioning, 129, 431  
 Place preference behavior, 683  
 Plasma amino acids, 1071  
 Plasma renin activity, 1061  
 Platelets, 1043  
 PmP, 259  
 Power spectrum analysis, 987  
 Prazosin, 421, 831  
 Preference, 933  
 Prenatal stress, 425  
 Primate, 495  
 Prolactin, 9, 37, 157, 557  
 Proline, 885  
 Propranolol, 133, 807  
 Protein synthesis inhibition, 873, 1003  
 Psychological stress, 569  
 Psychosis, 337  
 Punished drinking test, 323  
 Punishment, 743  
 Puromycin, 749  
 Pyriform cortex, 463
- Quinpirole, 1033  
 Quipazine, 585
- Radial maze, 87  
 Radioligand binding, 827, 831  
 Rats, 1, 17, 49, 55, 65, 123, 133, 151, 169, 191, 233, 259, 275, 283, 317, 405, 411, 453, 463, 469, 499, 527, 557, 601, 621, 743, 757, 797, 819, 873, 907, 945, 949, 971, 1009, 1067  
 Rat brain regions, 569  
 Rate-dependency, 241, 801  
 Receptor, 87  
 Receptor binding, 743  
 Receptor reserve, 141  
 Recovery, 841  
 Regional brain serotonin levels, 993  
 Reinforcement, 43, 129, 431, 933, 1009  
 Reinforcement schedule history, 643  
 REM sleep, 861  
 Renin-angiotensin system, 1061  
 Repeated acquisition, 439  
 Repeated treatment, 95  
 Reserpine, 815  
 Resistance to extinction, 55  
 Respiration, 357  
 Respiration rate, 9  
 Respiratory sinus arrhythmia, 175  
 Response force, 499  
 Response time, 399  
 Retina, 191  
 Reward, 411  
 Rhesus monkeys, 347, 691  
 Ritanserin, 787

- Ro 15-1788, 233, 613, 617, 901  
 Ro 15-4513, 163, 233, 671  
 Ro 5-4864, 367  
 Rotarod, 699  
 Route of administration, 677  
 Salt, 945  
 Satiety, 133  
 Satisfaction, 933  
 Scent, 613  
 SCH 23390, 71, 141, 585, 651, 691, 717, 945  
 Schedule-controlled behavior, 479  
 Schedule-induced polydipsia, 949  
 Schizophrenia, 337  
 Scopolamine, 241, 309, 723  
 Scopolamine hydrobromide, 707  
 Scopolamine methylbromide, 707  
 Sedation, 861  
 Seizures, 733, 1067  
 Self-administration, 43, 483, 527, 607, 691  
 Self-stimulation, 411  
 Semen, 377  
 Sensitization, 71, 77  
 Sensorimotor integration, 949  
 Sensory-evoked potentials, 757  
 SEP, 757  
 Serotonergic neuron, 815  
 Serotonergic system, 787  
 Serotonin, 259, 415, 491, 573, 585, 601, 1003, 1043, 1049  
 Serotonin (5-HT), 657  
 Serotonin antagonists, 657  
 Serotonin syndrome, 835  
 Sesquiterpenes, 1065  
 Set-point, 1025  
 Sexual behavior, 421  
 Sham-feeding, 447  
 Shock predictability, 569  
 Shock-induced aggression, 867  
 Sigma, 87  
 SK&F 38393, 815, 849, 945, 1033  
 SKF-10,047, 87  
 Skin blood flow, 601  
 Skin temperature, 601  
 Sleep, 27  
 Sleep-wakefulness, 519  
 Slow wave sleep (S1), 459  
 Slow wave sleep (S2), 459  
 SM-3997, 1049  
 Smoking, 933  
 Social behavior, 483, 637  
 Solvent abuse, 757  
 Soman, 49  
 Spasmodic dyskinesias, 1003  
 Spatial learning, 543  
 Spinal cord, 831, 897  
 Spontaneous activity, 661  
 Spontaneous alternation, 723  
 Spontaneous firing rate, 95  
 Spontaneous locomotor activity, 857  
 Squirrel monkeys, 309, 657, 919  
 Static ataxia, 661  
 Stereoselectivity, 661  
 Stereotyped behavior, 203, 589  
 Stereotypy, 77, 147, 249  
 Stimulus control, 283  
 Strains, 727  
 Stress, 557, 585, 791, 879, 913, 919, 1071  
 Stress-induced analgesia, 469  
 Striatum, 71, 221, 1003, 1067  
 Stroop test (numerical), 399  
 Strychnine and bicuculline, 169  
 Substantia nigra, 849, 1067  
 Suckling, 453  
 Sucrose, 383, 447, 499  
 Sudden death, 331  
 8-(p-Sulfophenyl)theophylline (8-pSPT), 487  
 Sulpiride, 71, 141, 651  
 Superior colliculus, 511  
 Supersensitivity, 95, 585, 727  
 Sweet preference, 117  
 Sympatho-adrenal activation, 9  
 Tail flick test, 601  
 Tail posture, 425  
 Tamoxifen, 87, 377  
 Tardive dyskinesia, 1057  
 Taste aversion, 819  
 TCP, 87  
 Temperature regulation, 367  
 Testosterone, 377  
 TFMPP, 361  
 THC, 483  
 $\Delta^9$ -THC, 661  
 Theophylline, 487  
 Thermogenesis, 301  
 Thermoregulation, 301  
 Thienyl-phencyclidine (TCP) and derivatives, 699  
 Thirst, 945  
 Time course, 309, 971  
 Time of injection, 791  
 Time-response effects, 949  
 Tobacco, 933  
 Tolerance, 267, 365, 519  
 Tolerance development, 543  
 Toluene, 283, 757, 987  
 Toxicity, 733  
 Treadmill, 797  
 Tremor, 823  
 Triazolam, 901  
 Trifluoromethylphenylpiperazine (TFMPP), 657  
 Trihexyphenidyl, 87  
 Tryptamine, 317, 907  
 Tubocurarine, 87  
 Turning behavior, 425  
 Type 2 receptors, 823  
 U50,488H, 469  
 Ultrasonic calls, 197  
 Underfeeding, 101  
 Upregulation, 727  
 Uptake, 1049  
 Vagal tone monitoring, 175  
 Valepotriates, 1065  
 Valerian, 1065  
 Vascular activity, 9  
 Ventral tegmental area, 625  
 Ventricular action potential, 83  
 Ventromedial hypothalamus, 301  
 Visual and auditory discrimination, 707  
 Visual-evoked potential, 191  
 VMH lesions, 301  
 Water intake, 383, 651  
 Wet dog shaking, 533  
 Wheel running, 17  
 White and black test box, 777  
 Withdrawal, 519  
 Word recall, 399  
 Wrigthing, 505  
 Xylazine, 207  
 Yawning, 815  
 Yohimbine, 151  
 Zimeldine, 415  
 ZK 93426, 671

## AUTHOR INDEX

- |                       |                          |                           |                         |
|-----------------------|--------------------------|---------------------------|-------------------------|
| Abd Allah, G., 83     | Arnon, E., 377           | Benowitz, N. L., 677      | Brady, J. V., 483       |
| Agrasal, C., 157      | Asin, K. E., 1033        | Bercovitz, H., 55         | Branch, M. N., 267      |
| Ahlenius, S., 797     | Aulakh, C. S., 37        | Berens, K., 439           | Britton, K. T., 967     |
| Akiyoshi, J., 491     | Baldwin, H. A., 181      | Berge, O.-G., 601         | Bubser, M., 621         |
| Alexander, G. J., 939 | Balfour, D. J. K., 857   | Bernardis, L. L., 957     | Caballero, A., 519      |
| Alkondon, M., 867     | Barber, D. J., 447       | Beyer, C., 169, 897       | Cabanac, M., 1025       |
| Allen, J. D., 949     | Bardo, M. T., 683        | Biggio, G., 671           | Cadet, J. L., 1003      |
| Alling, C., 629       | Barracough, S., 399      | Bijak, M., 95, 585        | Calcagnetti, D. J., 469 |
| Allweis, C., 873      | Barrett, J. E., 227, 309 | Blake, M. J., 743         | Cao, L., 553            |
| Altman, H. J., 801    | Bassett, J. R., 475      | Blanková-Vaňková, S., 405 | Caporali, M. G., 203    |
| Angelucci, L., 323    | Becker, H. C., 163       | Boja, J. W., 361          | Capriotti, R. M., 483   |
| Anton, R. F., 163     | Bellinger, L. L., 957    | Bolger, G. T., 595        | Carey, R. J., 577       |
| Apfelbaum, M., 117    | Ben-Or, S., 873          | Boomsma, F., 9            | Carney, J. M., 1017     |
| Aranko, K., 823       | Bennett, R. H., 677      | Bradbury, G. E., 77       | Castellano, C., 563     |
| Arendash, G. W., 841  |                          |                           |                         |

- Catalani, A., 323  
 Chance, W. T., 553  
 Chaoulloff, F., 573  
 Chatterjee, N., 939  
 Chaudieu, I., 699  
 Cherek, D. R., 677  
 Chicheportiche, M., 699  
 Chicheportiche, R., 699  
 Church, A. C., 749  
 Clark, D. E., 819  
 Cleary, J. P., 439  
 Cockroft, R., 147  
 Coen, K. M., 1009  
 Coenen, A. M. L., 27  
 Colle, L. M., 769  
 Commissaris, R. L., 801, 807  
 Compton, D. R., 661  
 Cooper, S. J., 447, 945  
 Copeland, R. L., Jr., 987  
 Corda, M. G., 671  
 Corrigall, W. A., 1009  
 Coscina, D. V., 275  
 Costa, S. M., 885  
 Costall, B., 777  
 Cramer, C. P., 453  
 Creighton, D., 331  
 Cunningham, M. G., 463
- Dacanay, R. J., 1  
 Dai, S., 1009  
 Danguir, J., 573  
 Davies, D. C., 187  
 Dawson, R., Jr., 391  
 de Andres, I., 519  
 Dellinger, J. A., 175  
 Dgany, O., 377  
 Dingemanse, J., 823  
 Donoso, A. O., 853  
 Durcan, M. J., 487, 667  
 Dworkin, S. I., 743  
 Dykstra, L. A., 439
- Eells, J. T., 191  
 Ehrensing, R. H., 737  
 Eide, P. K., 601  
 Elghozi, J.-L., 573  
 Ellison, G., 1057  
 Elsmore, T. F., 495, 971  
 Emmett-Oglesby, M. W., 129  
 Emurian, C. S., 483  
 Engel, J. A., 259  
 Esquivino, A. I., 157  
 Evans, J. A. C., 77  
 Evenden, J. L., 211
- Fahn, S., 993, 1003  
 Falk, J. L., 773  
 Fanselow, M. S., 469  
 Fantino, M., 117, 1025  
 Feder, H. H., 421  
 Feldman, M. J., 957  
 Feldon, J., 55, 65, 123  
 Ferber, C., 1025  
 Fermanian, J., 637  
 Fernandez, A., 671  
 File, S. E., 151, 181, 823  
 Fischer, J. E., 553  
 Fischman, M. W., 483  
 Flaherty, C. F., 383
- Fletcher, P. J., 317, 907  
 Flexner, J. B., 749  
 Flexner, L. B., 749  
 Foltin, R. W., 483  
 Fontana, D. J., 807  
 Foreman, N., 399  
 Fotuhi, M., 769  
 Fowler, S. C., 499  
 Frances, H., 637  
 Freed, W. J., 337, 733  
 Fride, E., 425, 873  
 Fundard, A., 1075  
 Fung, Y. K., 221  
 Furukawa, T., 815
- Gabriel, S. M., 391  
 Galloway, M. P., 993  
 Gambini, B., 323  
 Gargiulo, P. A., 853  
 Gauvin, D. V., 1017  
 Gear, J. C., 987  
 Genovese, R. F., 495  
 Gerber, G. J., 527  
 Ghosh, T. K., 987  
 Gilbert, D. B., 945  
 Giorgi, O., 671  
 Giovino, A. A., 581  
 Giuliani, A., 323  
 Goeders, N. E., 743  
 Goy, R. W., 421  
 Gramlich, C. A., 463  
 Grant, K. A., 607  
 Grant, V. L., 355  
 Griffith, J. A., 367  
 Grigson, P. S., 383  
 Grothues, A., 415  
 Grupp, L. A., 431, 1061  
 Güntürkün, O., 415
- Haas, N., 301  
 Haass, M., 37  
 Harbaugh, C. R., 197  
 Harland, R. D., 1017  
 Harrington, G. M., 801  
 Harro, J., 879  
 Harsing, L. G., Jr., 927  
 Hauger, R. L., 913  
 Hautkappe, A., 415  
 Heilzig, M., 629  
 Helmstetter, F. J., 469  
 Hendrie, C. A., 961  
 Henningfield, J. E., 933  
 Hernandez, L., 411  
 Herr, D. W., 831  
 Herz, A., 129  
 Hetzler, B. E., 511  
 Hill, J. L., 37  
 Hillegaart, V., 797  
 Hiroi, N., 249  
 Hirose, A., 1049  
 Hizami, R., 141  
 Hjorth, S., 259  
 Hoebel, B. G., 411  
 Holder, M. D., 17  
 Hole, K., 601  
 Holloway, F. A., 1017
- Ida, Y., 569, 791  
 Igoin, L., 117  
 Innes, D. G. L., 613  
 Insel, T. R., 197, 919
- Introini-Collison, I. B., 563  
 Inturrisi, C. E., 727  
 Irwin, M. R., 913  
 Itoh, K., 787  
 Izenwasser, S., 743, 983
- Jaaak, N. K., 49  
 Jackson-Lewis, V., 1003  
 Jamrozik, Z., 993  
 Jansen, H. T., 175  
 Johnston, A. L., 151, 823  
 Johnston, J. L., 101  
 Jolly, S. K., 807  
 Jones, B. J., 777
- Kalant, H., 1009, 1061  
 Kamei, J., 357  
 Kamenka, J.-M., 699  
 Kameyama, T., 651, 787  
 Kant, G. J., 557  
 Kapocsi, J., 927  
 Kastin, A. J., 737  
 Kasuya, Y., 357  
 Katz, M., 1003  
 Kavaliers, M., 613  
 Kawashima, K., 787  
 Kelly, M. E., 777  
 Kelly, T. H., 677  
 Khazam, C., 331  
 Kiivet, R.-A., 879  
 Kiritsy-Roy, J. A., 717  
 Kirkpatrick, M. A., 499  
 Kliner, D. J., 347  
 Klitenick, M. A., 625  
 Knapp, C. M., 977  
 Kodis, M., 957  
 Komisaruk, B. R., 169, 897  
 Koob, G. F., 967  
 Kornetsky, C., 977, 983  
 Kosse, K., 891  
 Kreuscher, S. P., 727  
 Kreuter, L., 141  
 Kulkarni, S. K., 233  
 Kumashaka, Y., 1049  
 Kuranaga, H., 491  
 Kuribara, H., 773
- Larson, A. A., 505  
 Laties, V. G., 283  
 Lau, Y.-S., 221  
 Lecribier, Y., 637  
 Leenen, F. H. H., 1061  
 Lett, B. T., 355  
 Leu, J. R., 971  
 Levin, E. D., 933  
 Lienard, C., 637  
 Lindahl, O., 1065  
 Lindwall, L., 1065  
 Lister, R. G., 667  
 Little, P. J., 661  
 Lorentz, G., 323  
 Lucot, J. B., 207  
 Lund, A., 601  
 Lynch, M. R., 577
- McCann, D. J., 87  
 McCarthy, M. M., 897  
 McClelland, R. C., 411
- McCloskey, T. C., 801, 807  
 McEwen, B. S., 421  
 McFarland, D. J., 723  
 McGaugh, J. L., 563  
 McKearney, J. W., 657  
 McLaughlin, C. R., 453  
 McLean, J. H., 737  
 McMillan, D. E., 711
- Madon, M., 399  
 Mailman, R. B., 831  
 Manev, H., 111  
 Mareš, P., 405  
 Markowitz, R. A., 309  
 Marriage, B. J., 101  
 Martin, B. R., 661  
 Martinez, R. A., 589  
 Marzanatti, M., 861  
 Mastropaoletti, J. P., 1  
 Matsumoto, S., 815  
 Matsuo, N., 815  
 Matteucci, M. J., 757  
 Mattson, S., 293  
 Mechoulam, R., 661  
 Mehrabani, P., 475  
 Mehta, A., 399  
 Meisch, R. A., 347  
 Mekkawy, H., 83  
 Melchior, J.-C., 117  
 Melk, A.-M., 511  
 Meller, E., 141  
 Meyer, E. M., 841  
 Meyerhoff, J. L., 557  
 Meyerson, L. R., 1043  
 Michaelis, R. C., 1017  
 Mikolášová, S., 405  
 Milakofsky, L., 1071  
 Miller, J. M., 1071  
 Mittleman, G., 211  
 Modrow, H. E., 49  
 Moleman, P., 9  
 Molinengo, L., 1075  
 Monopoli, A., 861  
 Montana, W. E., 1033  
 Moore, C., 399  
 Morali, G., 169  
 Moreira, J. C. F., 885  
 Morgan, P. F., 487  
 Moshé, S. L., 1067  
 Moskowitz, K. H., 1  
 Mougey, E. H., 557  
 Mouton, P. R., 841  
 Murphy, D. L., 37  
 Muscat, R., 133  
 Mück-Seler, D., 111
- Nabeshima, T., 787  
 Nabil, Z., 83  
 Nader, M. A., 227, 643  
 Nagashima, M., 815  
 Nagayama, H., 491  
 Nakamura, M., 1049  
 Nakayama, S., 651  
 Natelson, B. H., 331  
 Naylor, R. J., 777  
 Neisewander, J. L., 683  
 Newman, J. D., 919  
 Nobrega, J. N., 275  
 O'Neill, S. K., 595

- Ocheret, D., 1043  
 Ogawa, M., 357  
 Oguchi, M., 791  
 Oliveto, A. H., 439  
 Olson, G. A., 737  
 Olson, R. D., 737  
 Ongini, E., 861  
 Orsetti, M., 1075  
 Ottenweller, J. E., 331
- Parkinson, J. K., 971  
 Paterson, I. A., 907  
 Pavone, F., 563  
 Payne, J. M., 187  
 Peris, J., 71  
 Peričić, D., 111  
 Petitjean, F., 459  
 Pezzoli, G., 993  
 Picker, M. J., 439  
 Pierce, R. C., 683  
 Pignatiello, M. F., 737  
 Pöld, M., 879  
 Popoli, P., 203  
 Pradhan, S. N., 987  
 Preston, E., 301  
 Pryor, G. T., 757
- Rabin, R. A., 87  
 Rágo, L., 879  
 Ray, A., 867  
 Rebert, C. S., 757  
 Rees, D. C., 283  
 Rens-Domiano, S., 87  
 Reynolds, E. E., 749  
 Rigaud, D., 117  
 Riley, A. L., 1  
 Riley, E. P., 293  
 Roberts, D. C. S., 43  
 Robinzon, B., 377  
 Rommelspacher, H., 533  
 Rose, J. E., 933  
 Rozen, R., 117  
 Rozenboim, I., 377  
 Rusk, I. N., 447
- Saleh, M., 83  
 Sampson, A., 933  
 Sarfaty, T., 411  
 Sato, H., 569  
 Schama, K. F., 267  
 Schechter, M. D., 361  
 Schmidt, W. J., 621  
 Schnur, P., 589  
 Scotti de Carolis, A., 203  
 Seale, T. W., 1017  
 See, R. E., 1057  
 Segal, D. S., 913  
 Sen, P., 867  
 Sharpless, N. S., 1067  
 Shimizu, H., 1049  
 Shippenberg, T. S., 129  
 Shirakawa, K., 815  
 Shirao, I., 791  
 Sierra, V., 727  
 Signs, S. A., 361  
 Sinton, C. M., 459  
 Śmiałowski, A., 95, 585  
 Smith, T. L., 827, 913  
 Snapir, N., 377  
 Snodgrass, S. H., 949  
 Söderpalm, B., 259  
 Spanos, L. J., 835  
 Sperber, E. F., 1067  
 Standish, S. M., 717  
 Starr, B. S., 849  
 Starr, M. S., 849  
 Steinberg, J. L., 677  
 Stennett, R., 1003  
 Stewart, J., 581  
 Stewart, R. B., 431  
 Strano, R., 1043  
 Stripling, J. S., 463
- Tanaka, H., 1049  
 Tanaka, M., 569, 791  
 Tang, M., 773  
 Tapp, W. N., 331  
 Tatsuno, T., 1049  
 Terry, L. C., 717
- Thompson, T., 643  
 Thornton, E. W., 77  
 Thornton, J. E., 421  
 Ticku, M. K., 233  
 Tjølsen, A., 601  
 Tomkins, D. M., 777  
 Toth, E., 323  
 Towell, A., 133  
 Trampus, M., 861  
 Tresguerres, J. A. F., 157  
 Triandafillou, J., 301  
 Trouiller, G., 699  
 Truong, D. D., 993  
 Tsuchiyama, K., 491  
 Tsuda, A., 569, 791  
 Tsujimaru, S., 569, 791  
 Tulen, J. H. M., 9  
 Turek, F. W., 901
- Ukai, M., 651  
 Upchurch, M., 543
- Vale, A. L., 857  
 Vécsei, L., 629  
 Velfsek, L., 405  
 Vezina, P., 581  
 Vignon, J., 699  
 Vila, C. J., 365  
 Villanúa, M. A., 157  
 Virus, R. M., 691  
 Visé, F., 415  
 Vizi, E. S., 927  
 Vogel, W. H., 1071  
 van Haaren, F., 707  
 van Hest, A., 707  
 van Luijtelaar, E. L. J. M., 27  
 van Steenis, H. G., 9
- Wadenberg, M.-L., 797  
 Wajner, M., 885  
 Wallace, D. R., 391  
 Wannmacher, C. M. D., 885  
 Wawrzyniak, N., 415
- Wee, B. E. F., 901  
 Wehner, J. M., 543  
 Weiner, I., 55, 65, 123  
 Weinstein, D., 1057  
 Weinstock, M., 425  
 Wellman, P. J., 147, 819  
 Wenger, G. R., 241  
 Wessinger, W. D., 711  
 Whishaw, I. Q., 211  
 White, J. M., 479  
 White, N. M., 249  
 Wickens, A., 77  
 Widerlöv, E., 629  
 Widjaja, S., 533  
 Wilkison, D. M., 191  
 Willner, P., 133  
 Winslow, J. T., 919  
 Winter, J. C., 87  
 Wirtshafter, D., 625  
 Wise, R. A., 527, 581, 769  
 Wisniewski, H. M., 939  
 Witkin, J. M., 309, 971  
 Wolffgramm, J., 533  
 Wood, R. W., 283  
 Woolley, D. E., 367  
 Woolverton, W. L., 607, 691  
 Wozniak, K. M., 37  
 Wurpel, J. N. D., 1067
- Yamada, K., 815  
 Yamamoto, B. K., 835  
 Yirmiya, R., 17  
 Yoburn, B. C., 727  
 Yutrzenka, G. J., 891
- Zahniser, N. R., 71  
 Zimmerberg, B., 293  
 Zohar, J., 37  
 Zwilling, U., 415