

**PHARMACOLOGY BIOCHEMISTRY  
&  
BEHAVIOR**

**Index to  
VOLUME 19**



## CONTENTS

<b>Drug sensitivity of individual rats determines degree of drug discrimination.</b> SCHECHTER, M. D. ....	1
<b>Unique influences of ten drugs upon post-shock biting attack and pre-shock manual responding.</b> EMLEY, G.S. and R. R. HUTCHINSON .....	5
<b>An automated method for measurement of circling behavior in the mouse.</b> TORELLO, M. W., J. CZEKAJEWSKI, E. A. POTTER, K. J. KOBER and Y. K. FUNG .....	13
<b>Facilitation by <math>\alpha</math>-adrenolytics of apomorphine gnawing behavior: Depression of threshold apomorphine concentration in the striatum of the rat.</b> WISZNIOWSKA-SZAFRANIEC, G., L. DANEK, K. REICHENBERG and J. VETULANI .....	19
<b>Effect of intraventricular adenosine on food intake in rats.</b> LEVINE, A. S. and J. E. MORLEY .....	23
<b>Interaction between noradrenergic and serotonergic brain systems as evidenced by behavioral and biochemical effects of microinjections of adrenergic agonists and antagonists into the median raphe nucleus.</b> PŁAŻNIK, A., W. DANYSZ, W. KOSTOWSKI, A. BIDZIŃSKI and M. HAUPTMANN .....	27
<b>Amphetamine: Differential effects on defensive flight and motor behavior in the rat.</b> MOLLENAUER, S., C. JACKSON and T. POLLACK .....	33
<b>A behavioral examination of convulsant benzodiazepine and GABA antagonist, Ro 5-3663, and benzodiazepine-receptor antagonist Ro 15-1788.</b> FELDON, J., T. LERNER, D. LEVIN and M. MYSLOBODSKY .....	39
<b>Changes in activities of fucokinase and fucosyltransferase in rat hippocampus after acquisition of a brightness discrimination reaction.</b> POPOV, N., S. SCHMIDT, S. SCHULZECK, R. JORK, B. LÖSSNER and H. MATTHIES .....	43
<b>Potentiation of apomorphine-induced stereotypies by naloxone and L-prolyl-L-leucyl-glycinamide.</b> QUOCK, R. M., T. S. LUCAS and T. J. HARTL .....	49
<b>Production of physical dependence on ethanol by a short drinking episode each day.</b> TANG, M. and J. L. FALK .....	53
<b>Automated analysis of stereotypic behavior induced by psychomotor stimulants.</b> BRANN, M. R., M. HACKER, M. FINNERTY, J. ELLIS, R. H. LENOX and Y. H. EHRLICH .....	57
<b>Genotypic variation in the dopaminergic inhibitory control of striatal and hippocampal cholinergic activity in mice.</b> DURKIN, T. P., H. HASHEM-ZADEH, P. MANDEL, J. KEMPF and A. EBEL .....	63

Contents continued

<b>Effects of acarbose on food intake, body weight and fat depots in lean and obese rats.</b> GLICK, Z. and G. A. BRAY .....	71
<b>Antinociception following microinjection of dibutyryl cyclic nucleotides into the caudal reticular formation and periaqueductal gray of the rat brain.</b> LEVY, R. A., H. K. PROUDFIT and B. D. GOLDSTEIN .....	79
<b>Effects of a glucosidase inhibitor (Acarbose, Bay g 5421) on the development of obesity and food motivated behavior in Zucker (fa/fa) rats.</b> VASSELLI, J. R., E. HARACZKIEWICZ, C. A. MAGGIO and M. R. C. GREENWOOD .....	85
<b>Discriminative stimulus properties of buspirone compared to central nervous system depressants in rats.</b> HENDRY, J. S., R. L. BALSTER and J. A. ROSECRANS .....	97
<b>Quantitation of tolerance development after chronic oxotremorine treatment.</b> MARKS, M. J., L. D. ARTMAN and A. C. COLLINS .....	103
<b>Tolerance to ethanol in rats bred on essential-fatty-acid deficient diets.</b> JONES, A. W., C. ALLING, W. BECKER and E. ÅNGGÅRD .....	115
<b>T-maze learning, spontaneous activity and food intake recovery following systemic administration of the noradrenaline neurotoxin, DSP4.</b> ARCHER, T., A. K. MOHAMMED, S. B. ROSS and U. SÖDERBERG .....	121
<b>Antagonism of alcohol hypnosis by blockade of prostaglandin synthesis and activity: Genotype and time course effects.</b> GEORGE, F. R., T. C. HOWERTON, G. I. ELMER and A. C. COLLINS .....	131
<b>Effects of amphetamine and apomorphine on locomotor activity after 6-OHDA and electrolytic lesions of the nucleus accumbens septi.</b> KELLY, P. H. and D. C. S. ROBERTS .....	137
 <i>BRIEF COMMUNICATIONS</i>	
<b>The discriminative stimulus properties of cocaine in the rhesus monkey.</b> GARZA, R. DE LA and C. E. JOHANSON .....	145
<b>The effects of levonantradol on rewarding brain stimulation thresholds in the rat.</b> KUCHARSKI, L. T., J. E. G. WILLIAMS and C. KORNETSKY .....	149
<b>Spontaneous and apomorphine-induced locomotor changes parallel dopamine receptor differences in two rat strains.</b> HELMESTE, D. M. ....	153

## CONTENTS

<b>Influence of luteinizing hormone releasing hormone (LHRH) on the behavioral effects of amphetamine in rats.</b>	
MORA, S. and G. DÍAZ-VÉLIZ .....	157
<b>Opiate Effects on isolation-induced hyperthermia.</b>	
FROHM, K. D. and L. B. WALLNAU .....	163
<b>A biphasic influence of globus pallidus lesions: Spontaneous catalepsy followed by anticataleptic effect.</b>	
OSSOWSKA, K., M. ŚMIAŁOWSKA and S. WOLFARTH .....	169
<b>Differential clonidine effects on EEG following lesions of the dorsal and median raphe nuclei in rats.</b>	
DYR, W., W. KOSTOWSKI, B. ZACHARSKI and A. BIDZINSKI .....	177
<b>The influence of environmental variables on amphetamine-induced activity in the preweanling rat.</b>	
RASKIN, L. A. ....	187
<b>Effects of the chronic ingestion of therapeutic doses of chlorimipramine on the behavioral action of agonists and antagonists of serotonin in male rats.</b>	
RODRÍGUEZ ECHANDÍA, E. L., S. T. BROITMAN and M. R. FÓSCOLO ..	193
<b>The effects of chronic haloperidol administration on GABA receptor binding.</b>	
HUFFMAN, R. D. and M. K. TICKU .....	199
<b>Nisoxetine and amphetamine share discriminative stimulus properties in mice.</b>	
SNODDY, A. M. and R. E. TESSEL .....	205
<b>Effects of agonists and antagonists of D1 and D2 dopamine receptors on self-stimulation of the medial prefrontal cortex in the rat.</b>	
FERRER, J. M. R., A. M. SANGUINETTI, F. VIVES and F. MORA .....	211
<b>Tolerance to amphetamine-induced inhibition of neuronal activity in the central amygdaloid nucleus.</b>	
REBEC, G. W. and E. H. LEE .....	219
<b>The involvement of nigral serotonin innervation in the control of punishment-induced behavioral inhibition in rats.</b>	
THIÉBOT, M.-H., M. HAMON and P. SOUBRIÉ .....	225
<b>An <i>in-vivo</i> method for testing drugs that influence striatal dopaminergic functions.</b>	
FUNG, Y. K. and R. D. SCHWARZ .....	231
<b>Nalmefene decreases meal size, food and water intake and weight gain in Zucker rats.</b>	
McLAUGHLIN, C. L. and C. A. BAILE .....	235
<b>Facilitation of an operant task in the rat following injection of whole brain extract.</b>	
MORRIS, P. E. and J. M. BEATON .....	241

Contents continued

<b>Serine and glycine-induced catalepsy porphyric rats: An animal model for psychosis?</b> SCHOUTEN, M. J., J. BRUINVELS, L. PEPPLINKHUIZEN and J. H. P. WILSON .....	245
<b>Effects of heat-stress on behavior and the pituitary-adrenal axis in rats.</b> GALINA, Z. H., C. J. SUTHERLAND and Z. AMIT .....	251
<b>Strain dependent rate of Li<sup>+</sup> elimination associated with toxic effects of lethal doses of lithium chloride in mice.</b> EL-KASSEM, M. and S. M. SINGH .....	257
<b>Drug-induced changes in motor activity after selective MAO inhibition.</b> GIANUTSOS, G., G. M. CARLSON and J. G. GODFREY .....	263
<b>The effects of morphine sulphate on ovulation in the immature rat treated with PMSG.</b> HULSE, G. K. and G. J. COLEMAN .....	269
<b>Long-lasting reduction in ethanol selection after involuntary intake of ethanol/chlordiazepoxide.</b> CHAN, A. W. K., D. L. SCHANLEY and F. W. LEONG .....	275
<b>Unilateral injection of GABA agonists in the superior colliculus: Asymmetry to tactile stimulation.</b> DI SCALA, G., P. SCHMITT and P. KARLI .....	281
<b>Regional rat brain noradrenaline turnover in response to restraint stress.</b> GLAVIN, G. B., M. TANAKA, A. TSUDA, Y. KOHNO, Y. HOAKI and N. NAGASAKI .....	287
<b>Nicotine dependence in cigarette smoking: An empirically-based, multivariate model.</b> POMERLEAU, O. F., J. B. FERTIG and S. O. SHANAHAN .....	291
<b>Morphine applied to the mesencephalic central gray suppresses brain stimulation induced escape.</b> JENCK, F., P. SCHMITT and P. KARLI .....	301
<b>Loss of cholinergic neurons in the rat neocortex produces deficits in passive avoidance learning.</b> FRIEDMAN, E., B. LERER and J. KUSTER .....	309
<b>Increased shock-induced fighting with supersensitive <math>\beta</math>-adrenergic receptors.</b> HEGSTRAND, L. R. and B. EICHELMAN .....	313
<b>Brain biogenic amines and pituitary-adrenocortical function in the rat.</b> MAICKEL, R. P. and R. R. MARTEL .....	321
<b>The role of associative factors in tolerance to the hypothermic effects of morphine in mice.</b> SHAPIRO, N. R., B. C. DUDEK and R. A. ROSELLINI .....	327
<b>Muscimol inhibits ADH release induced by hypertonic sodium chloride in rats.</b> IOVINO, M., G. DE CARO, M. MASSI, L. STEARDO and S. POENARU .....	335
<b>Caffeine modification of kindled amygdaloid seizures.</b> ALBERTSON, T. E., R. M. JOY and L. G. STARK .....	339
<b>Dose-dependent preconvulsant and anticonvulsant actions of the <math>\alpha_2</math> adrenergic agonist, xylazine, on kindled seizures in the rat.</b> JOY, R. M., L. G. STARK and T. E. ALBERTSON .....	345
<b>Suppression of lordotic responsiveness in the female rat during mesencephalic electrical stimulation.</b> ARENDASH, G. W. and R. A. GORSKI .....	351

**Autonomic drug effects and gastric secretion in a new experimental model of stress ulcers in rats.**  
MINE, K., T. NODA, M. FUJIWARA, N. TSURUTA, S. UEKI and  
T. NAKAGAWA ..... 359

*BRIEF COMMUNICATIONS*

**Cardiovascular and plasma prolactin responses to stereoisomers of phencyclidine.**  
BAYORH, M. A., D. LOZOVSKY, K. C. RICE, T. R. BURKE, JR., and  
I. J. KOPIN ..... 365

**Therapeutic effects of GABA-ergic drugs in affective disorders. A preliminary report.**  
EMRICH, H. M., H. ALTMANN, M. DOSE and D. VON ZERSEN ..... 369

**Adrenalectomy potentiates drinking induced by renal artery constriction.**  
ATKINSON, J. .... 373

**Abolition of conditioned heart-rate responses in rabbits following central administration of [N-MePhe<sup>3</sup>,  
D-Pro<sup>4</sup>] morphiceptin.**  
LAVOND, D. G., M. D. MAUK, J. MADDEN, IV., J. D. BARCHAS and  
R. F. THOMPSON ..... 379

*ANNOUNCEMENTS* ..... 383





## CONTENTS

<b>Drug dependence: Myth or motive?</b>	
FALK, J. L., Presidential Address, Division 28 of the American Psychological Association	385
<b>Daily increase in noradrenaline turnover in brain regions of activity-stressed rats.</b>	
TSUDA, A., M. TANAKA, Y. KOHNO, Y. IDA, Y. HOAKI, K. IIMORI, R. NAKAGAWA, T. NISHIKAWA and N. NAGASAKI	393
<b>Opiate antagonists, morphine and spatial memory in rats.</b>	
BEATTY, W. W.	397
<b>Adrenal modulation of opiate induced feeding.</b>	
LEVINE, A. S. and J. E. MORLEY	403
<b>Behavioral effects of lesions of the central noradrenergic bundles in the rat.</b>	
VERLEYE, M. and F. BERNET	407
<b>Phenytoin: Similarity to tricyclic antidepressants.</b>	
SCHECHTER, M. D. and N. L. GREER	415
<b>Synergistic effect of propranolol and quipazine on desipramine enhanced shock-elicited fighting in rats.</b>	
PRASAD, V. and M. H. SHEARD	419
<b>Effect of high doses of naloxone on shuttle avoidance acquisition in rats.</b>	
TURNBULL, B. A., D. L. HILL, L. H. MILLER, J. MCELROY and R. S. FELDMAN	423
<b>The effect of opiate treatment on the postdecapitation reflex and monoamine metabolism in the rat spinal cord.</b>	
PLAZNIK, A., M. G. DE SIMONI and S. ALGERI	427
<b>Hydrocortisone reduces auditory sensitivity at high tonal frequencies in adult males.</b>	
BECKWITH, B. E., K. LERUD, J. R. ANTES and B. W. REYNOLDS	431
<b>Tolerance and sensitization to the biphasic effects of low doses of morphine in the hamster.</b>	
SCHNUR, P., F. BRAVO and M. TRUJILLO	435
<b>Motivational properties of ethanol in naive rats as studied by place conditioning.</b>	
VAN DER KOOY, D., M. O'SHAUGHNESSY, R. F. MUCHA and H. KALANT	441
<b>Potentiation of cold-water swim analgesia and hypothermia by clonidine.</b>	
BODNAR, R. J., K. P. MERRIGAN and E. SPERBER	447
<b>Effects of body weight reduction and food deprivation on cocaine self-administration.</b>	
OEI, T. P. S.	453
<b>Strain specific cholinergic changes in response to stress: Analysis of a time-dependent avoidance variation.</b>	
COOPER, D. O., D. E. SCHMIDT and R. J. BARRETT	457

Contents continued

<b>Reserpine-induced rigidity in rats: Drug effects on muscle tone from corpus striatum and nucleus accumbens.</b>	
JOHNELS, B. ....	463
<b>Deuterium substitution enhances the effects of <math>\beta</math>-phenylethylamine on spontaneous motor activity in the rat.</b>	
DOURISH, C. T., A. J. GREENSHAW and A. A. BOULTON ....	471
<b>Evaluation of neurotensin's thermolytic action by ICV infusion with receptor antagonists and a <math>Ca^{++}</math> chelator.</b>	
LEE, T. F., J. R. HEPLER and R. D. MYERS ....	477
<b>Mucosal damage following electrical stimulation of the anterior cingulate cortex and pretreatment with atropine and cimetidine.</b>	
HENKE, P. G. ....	483
<b>Acute and chronic amphetamine treatment: Differential modification of exploratory behavior in a radial maze.</b>	
BRUTO, V. and H. ANISMAN ....	487
<b>Attenuation of perseverative behavior after repeated amphetamine treatment: Tolerance or attentional deficits?</b>	
BRUTO, V., L. KOKKINIDIS and H. ANISMAN ....	497
<b>Patterns of drinking in the rat following the administration of opiate antagonists.</b>	
COOPER, S. J. and S. G. HOLTZMAN ....	505
<b>The effects of alcohol induced malnutrition in pregnancy on offspring brain and behavioral development.</b>	
BARTLEY, H. L., I. R. COYLE and G. SINGER ....	513
<b>On the mechanism of serotonin-induced dipsogenesis in the rat.</b>	
KIKTA, D. C., C. C. BARNEY, R. M. THREATTE, M. J. FREGLY, N. E. ROWLAND and J. E. GREENLEAF ....	519
<b>Harmaline effects on the sensory-motor reactivity: Modifications of the acoustic startle pattern.</b>	
PELLET, J., M. WEISS and M.-J. GOURDON ....	527
<b>On the mechanism by which methylxanthines enhance apomorphine-induced rotation behaviour in the rat.</b>	
FREDHOLM, B. B., M. HERRERA-MARSCHITZ, B. JONZON, K. LINDSTRÖM and U. UNGERSTEDT ....	535
<b>Regional characteristics of stress-induced increases in brain noradrenaline release in rats.</b>	
TANAKA, M., Y. KOHNO, R. NAKAGAWA, Y. IDA, S. TAKEDA, N. NAGASAKI and Y. NODA ....	543
<b>Separation of clonazepam-induced head twitches and muscle relaxation in mice.</b>	
NAKAMURA, M. and J. M. CARNEY ....	549
 <i>BRIEF COMMUNICATIONS</i>	
<b>Effects of urinary pH on the behavioral responses of squirrel monkeys to nicotine.</b>	
GRUNBERG, N. E., D. E. MORSE and J. E. BARRETT ....	553
<b>The effect of acute nicotine administration on plasma levels of the thyroid hormones and corticosterone in the rat.</b>	
CAM, G. R. and J. R. BASSETT ....	559
 <i>ANNOUNCEMENTS</i> .....	563

## CONTENTS

<b>Arginine vasopressin enhances retention of morphine tolerance.</b> MOORE, J. E. ....	561
<b>Effects of ethanol, given during pregnancy, on the offspring dopaminergic system.</b> LUCCHI, L., V. COVELLI, V. V. PETKOV, P.-F. SPANO and M. TRABUCCHI	567
<b>Ethanol preference following hypothalamic stimulation: Relation to stimulation parameters and energy balance.</b> ATRENS, D. M., P. MARFAING-JALLAT and J. LE MAGNEN .....	571
<b>The effect of peripherally administered satiety substances on feeding induced by butorphanol tartrate.</b> MORLEY J. E., A. S. LEVINE, J. KNEIP, M. GRACE and C. J. BILLINGTON	577
<b>Estrous cyclicity in rats fed an ethanol diet for four months.</b> KRUEGER, W. A., W. J. BO and P. K. RUDEEN .....	583
<b>Vasopressin and oxytocin content in cerebrospinal fluid and in various brain areas after administration of histamine and pentylene-tetrazol.</b> MENS, W. B. J., F. LACZI, J. A. D. M. TONNAER, E. R. DE KLOET and TJ. B. VAN WIMERSMA GREIDANUS .....	587
<b>The effects of chronic amphetamine administration on the acquisition and extinction of an active and passive avoidance response in mice.</b> KOKKINIDIS, L. ....	593
<b>Failure of dexamethasone to influence sex differences in acquisition of discriminated lever press avoidance.</b> HEINSBROEK, R. P. W., H. G. VAN OYEN, N. E. VAN DE POLL and G. J. BOER .....	599
<b>Taste and nicotine as determinants of voluntary tobacco use by hamsters.</b> KSIR, C. ....	605
<b>Opiate regulation of maternal behavior in the rat.</b> GRIMM, C. T. and R. S. BRIDGES .....	609
<b>The involvement of gonads and gonadal steroids in the regulation of food intake, body weight and adiposity in the white leghorn cock.</b> SNAPIR, N., B. ROBINZON and B. SHALITA .....	617
<b>Anti-conflict and depressant effects by GABA agonists and antagonists, benzodiazepines, and non-gabergic anticonvulsants on self-stimulation and locomotor activity.</b> HERBERG, L. J. and S. F. WILLIAMS .....	625
<b>Effects of acrylamide on locomotion and central monoamine function in the rat.</b> RAFALES, L. S., S. M. LASLEY, R. D. GREENLAND and T. MANDYBUR	635

Contents continued

<b>Effects of ethanol on behaviour of aggressive mice from two different strains: A comparison of simple and complex behavioural assessments.</b>	
SMOOTHY, R. and M. S. BERRY .....	645
<b>Substance P enhancement of passive and active avoidance conditioning in mice.</b>	
SCHLESINGER, K., D. U. LIPSITZ, P. L. PECK, M. A. PELLEYMOUNTER, J. M. STEWART and T. N. CHASE .....	655
<b>Disinhibition of muricide and irritability by intraseptal muscimol.</b>	
POTEGAL, M., B. YOBURN and M. GLUSMAN .....	663
<b>Multi-dimensional analyses of behavior in mice treated with morphine, endorphins and [des-tyrosine<sup>1</sup>]-<math>\gamma</math>-endorphin.</b>	
KAMEYAMA, T. and M. UKAI .....	671
<b>Social isolation: Effects on pain threshold and stress-induced analgesia.</b>	
PUGLISI-ALLEGRA, S. and A. OLIVERIO .....	679
<b>Initial sensitivity and acute tolerance to ethanol in the P and NP lines of rats.</b>	
WALLER, M. B., W. J. McBRIDE, L. LUMENG and T.-K. LI .....	683
<b>Increased responsiveness to ethanol with advancing age in rats.</b>	
YORK, J. L. ....	687
<b>Suppression of exploratory locomotor activity by the local application of dopamine or <i>l</i>-noradrenaline to the nucleus accumbens of the rat.</b>	
SVENSSON, L. and S. AHLENIUS .....	693
<b>Effects of heroin, methadone, LAAM and cyclazocine on acquisition and performance of response sequences in monkeys.</b>	
MOERSCHBAECHER, J. M., D. M. THOMPSON and P. J. WINSAUER .....	701
<b>Self-administration of ketocyclazocine and ethylketocyclazocine by the rat.</b>	
YOUNG, G. A. and N. KHAZAN .....	711
<b>Electromyographic power spectral changes associated with the sleep-awake cycle and with diazepam treatment in the rat.</b>	
YOUNG, G. A. and N. KHAZAN .....	715
<b>The effects of single and repeated doses of maprotiline, oxaprotiline and its enantiomers on foot-shock induced fighting in rats.</b>	
MOGILNICKA, E., C. G. BOISSARD, P. C. WALDMEIER and A. DELINI-STULA .....	719
 <i>BRIEF COMMUNICATIONS</i>	
<b>Play soliciting in juvenile male rats: Effects of caffeine, amphetamine and methylphenidate.</b>	
THOR, D. H. and W. R. HOLLOWAY, JR. ....	725
<b>A microcomputer method for behavioural data acquisition and subsequent analysis.</b>	
DEPAULIS, A. ....	729

## CONTENTS

<b>Amnesia attenuation specificity: Propranolol reverses norepinephrine but not cycloheximide-induced amnesia.</b>	
ELLIS, M. E., R. F. BERMAN and R. P. KESNER .....	733
<b>N-allylnormetazocine (SKF-10,047): The induction of feeding by a putative sigma agonist.</b>	
GOSNELL, B. A., A. S. LEVINE and J. E. MORLEY .....	737
<b>Differential effects of selective dopamine, norepinephrine or catecholamine depletion on activity and learning in the developing rat.</b>	
RASKIN, L. A., B. A. SHAYWITZ, G. M. ANDERSON, D. J. COHEN, M. H. TEICHER and J. LINAKIS .....	743
<b>Discriminative stimulus control with imipramine: Transfer to other anti-depressants.</b>	
SCHECHTER, M. D. ....	751
<b>Interference by a nonpharmacological factor on the action of psychoactive drugs in rats. A comparative study.</b>	
SILVA-FILHO, A. R., H. M. LODDER and J. MASUR .....	755
<b>Cataleptogenic potency of the antipsychotic drugs is inversely correlated with neuronal activity in the amygdaloid complex of the rat.</b>	
REBEC, G. V., J. GELMAN, K. D. ALLOWAY and T. R. BASHORE .....	759
<b>Prolonged animal observation by use of digitized videodisplays.</b>	
SPRUIJT, B. M. and W. H. GISPEN .....	765
<b>A comparison of the effects of corticotropin releasing factor and sauvagine on food intake.</b>	
GOSNELL, B. A., J. E. MORLEY and A. S. LEVINE .....	771
<b>Effects of prenatal exposure to morphine sulfate on reproductive function of female rats.</b>	
VATHY, I. U., A. M. ETGEN, J. RABII and R. J. BARFIELD .....	777
<b>Further studies on alterations in male rat copulatory behavior induced by the dopamine-receptor agonist RDS-127.</b>	
CLARK, J. T., M. L. STEFANICK, E. R. SMITH and J. M. DAVIDSON ....	781
<b>Chlordiazepoxide increases the force of two topographically distinct operant responses in rats.</b>	
FOWLER, S. C., R. M. LEWIS, S. E. GRAMLING and G. L. NAIL .....	787
<b>Leucinal inhibits brain aminopeptidase activity and potentiates analgesia induced by leu-enkephalin.</b>	
DAVIS, K. R., D. E. HERNANDEZ and R. WOLFENDEN .....	791
<b>The role of endogenous opioids in the blockade of reproductive function in the rat following exposure to acute stress.</b>	
HULSE, G. K. and G. J. COLEMAN .....	795

Contents continued

<b>Comparative effects of estradiol stereoisomers on pimozone-induced catalepsy.</b>	
JOHNSON, N. J. and R. STEVENS .....	801
<b>Hypophysectomy-induced striatal hypersensitivity and mesolimbic hyposensitivity to apomorphine.</b>	
GORDON, J. H. ....	807
<b>Rotational behavior following cholinergic stimulation of the superior colliculus in rats.</b>	
WELDON, D. A., L. C. CALABRESE and K. J. NICKLAUS .....	813
<b>Tripelennamine effects on body and organ weights, water intake, and several behaviors of rats.</b>	
NANRY, K. P., R. G. SEWELL, JR., J. A. GALLUS, S. A. VANECEK and A. POLING .....	821
<b>Systemic naloxone increases the incidence of motion sickness in the cat.</b>	
CRAMPTON, G. H. and N. G. DAUNTON .....	827
<b>Effects of catecholamine agonist and antagonist drugs on acute stomach ulceration induced by medial hypothalamic lesions in rats.</b>	
NOBREGA, J. N. and N. I. WIENER .....	831
<b>Increased susceptibility of audiogenic rats to barbital withdrawal convulsions.</b>	
BOURN, W. M. and R. L. GARRETT .....	839
<b>Effects of minimum-interreinforcer interval on ethanol-maintained performance of rats.</b>	
BEARDSLEY, P. M., G. A. LEMAIRE and R. A. MEISCH .....	843
<b>Monoamine and metabolite levels in CNS regions of the P line of alcohol-preferring rats after acute and chronic ethanol treatment.</b>	
MURPHY, J. M., W. J. McBRIDE, L. LUMENG and T.-K. LI .....	849
<b>Behavioral and physiological effects of capsaicin in red-winged blackbirds.</b>	
MASON, J. R. and J. A. MARUNIAK .....	857
<b>Effects of mu- and kappa-opioid receptor agonists on urinary output in mice.</b>	
RATHBUN, R. C., R. W. KATTAU and J. D. LEANDER .....	863
<b>Affinity for the dopamine D<sub>2</sub> receptor predicts neuroleptic potency in blocking the reinforcing effect of MFB stimulation.</b>	
GALLISTEL, C. R. and A. J. DAVIS .....	867
<b>Serotonin receptor antagonists induce hyperalgesia without preventing morphine antinociception.</b>	
BERGE, O.-G., O. B. FASMER and K. HOLE .....	873
<b>Antinociceptive activity of N-(4-hydroxyphenacetyl)-4-aminoclonidine, a novel analog of clonidine: Role of opioid receptors and <i>alpha</i>-adrenoceptors.</b>	
HYNES, M. D., D. ATLAS and R. R. RUFFOLO, JR. ....	879
<b>Attack stress and IgE antibody production in rats.</b>	
ITO, Y., K. MINE, Y. AGO, T. NAKAGAWA, M. FUJIWARA and S. UEKI .	883
<b>Cigarette smokers self-administer intravenous nicotine.</b>	
HENNINGFIELD, J. E., K. MIYASATO and D. R. JASINSKI .....	887

### *BRIEF COMMUNICATIONS*

<b>Excitatory effects of the vasodilator hydralazine on acoustic startle in the rat.</b>	
COMMISSARIS, R. L. and M. DAVIS .....	891

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

<b>Evidence for intrinsic behavioural activity of the benzodiazepine antagonist, Ro15-1788, in male mice.</b>	
RODGERS, R. J., A. J. WATERS and S. ROSENFELD .....	895
<b>Toluene inhalation and anxiolytic activity: Possible synergism with diazepam.</b>	
GELLER, I., R. J. HARTMANN, V. MENDEZ and E. M. GAUSE .....	899
<b>6-Hydroxydopamine and 5,7-dihydroxytryptamine selectively reduce dopamine and 5-hydroxytryptamine metabolites in cerebroventricular perfusates of rats.</b>	
NIELSEN, J. A. and K. E. MOORE .....	905
<b>BOOKS RECEIVED</b> .....	909





## CONTENTS

<b>Effects of pentazocine and tripeleennamine on analgesia.</b>	
CLEARY, J., S. WALLACE, D. GROSSETT, M. PICKER and A. POLING . . .	911
<b>Hypophysectomy prevents yawning and penile erection but not hypomotility induced by apomorphine.</b>	
SERRA, G., M. COLLU, S. LODDO, G. CELASCO and G. L. GESSA . . . . .	917
<b>The stinging response of the honeybee: Effects of morphine, naloxone and some opioid peptides.</b>	
NÚÑEZ, J., H. MALDONADO, A. MIRALTO and N. BALDERRAMA . . . . .	921
<b>The lack of effects of somatostatin on gastric responses induced by electrical vagal stimulation.</b>	
CHO, C. H., S. W. CHEN, S. M. CHEN and L. T. HO . . . . .	925
<b>Intraventricular glucose administration inhibits feeding in satiated but not in 24 hours food deprived cocks.</b>	
ROBINZON, B. and N. SNAPIR . . . . .	929
<b>Effect of exposure to high concentrations of toluene on ethanol preference of laboratory rats.</b>	
GELLER, I., R. J. HARTMANN and E. M. GAUSE . . . . .	933
<b>Inhibition of morphine-induced analgesia and locomotor activity in strains of mice: A comparison of long-acting opiate antagonists.</b>	
FRISCHKNECHT, H.-R., B. SIEGFRIED, G. RIGGIO and P. G. WASER . . . . .	939
<b>Feeding behavior induced by central norepinephrine injection is attenuated by discrete lesions in the hypothalamic paraventricular nucleus.</b>	
LEIBOWITZ, S. F., N. J. HAMMER and K. CHANG . . . . .	945
<b>Strain differences in susceptibility to the convulsant actions of 3-carbomethoxy-<math>\beta</math>-carboline.</b>	
SCHWERI, M. M., S. M. PAUL and P. SKOLNICK . . . . .	951
<b>Behavioral comparison of pentylenetetrazol, clonidine, chlordiazepoxide and diazepam in infant rats.</b>	
PAPPAS, B. A. and P. WALSH . . . . .	957
<b>Effects of cholinergic drugs on delayed match-to-sample performance of rhesus monkeys.</b>	
PENETAR, D. M. and J. H. McDONOUGH, JR. . . . .	963
<b>A caerulein-sensitive potentiation of the behavioral effects of apomorphine by dibutyryl-cAMP.</b>	
ELLINWOOD, E. H., JR., W. J. K. ROCKWELL and N. WAGONER . . . . .	969
<b>Tonic convulsive thresholds and responses during the postnatal development of rats administered 6-hydroxydopamine or 5,7-dihydroxytryptamine within three days following birth.</b>	
WALLER, S. B. and G. G. BUTERBAUGH . . . . .	973
<b>Ionizing radiation alters beta-endorphin-like immunoreactivity in brain but not blood.</b>	
MICKLEY, G. A., K. E. STEVENS, G. H. MOORE, W. DEERE, G. A. WHITE, G. L. GIBBS and G. P. MUELLER . . . . .	979

Contents continued

<b>The suppression of ethanol self injection by buprenorphine.</b>	
MARTIN, A., R. PILOTTO, G. SINGER and T. P. S. OEI .....	985
 <i>MEETING REPORT</i>	
<b>Nicotine as a reinforcer in human subjects and laboratory animals</b> .....	987
<b>Nicotine as a reinforcer in human subjects and laboratory animals.</b>	
HENNINGFIELD, J. E. and S. R. GOLDBERG .....	989
<b>Nicotine self-administration in baboons.</b>	
ATOR, N. A. and R. R. GRIFFITHS .....	993
<b>Schedule-induction of nicotine self-administration.</b>	
SLIFER, B. L. ....	1005
<b>Control of behavior by intravenous nicotine injections in laboratory animals.</b>	
GOLDBERG, S. R., R. D. SPEALMAN, M. E. RISNER and J. E. HENNINGFIELD .....	1011
<b>Control of behavior by intravenous nicotine injections in human subjects.</b>	
HENNINGFIELD, J. E. and S. R. GOLDBERG .....	1021
<b>Interrelationships between behavior and pharmacology as factors determining the effects of nicotine.</b>	
BARRETT, J. E. ....	1027
 <i>BRIEF COMMUNICATIONS</i>	
<b>Malathion administration: Effects on physiological and physical performance in the heat.</b>	
FRANCESCONI, R., R. HUBBARD and M. MAGER .....	1031
<b>CSF-plasma relationships for DSIP and some other neuropeptides.</b>	
BANKS, W. A. and A. J. KASTIN .....	1037
<b>Postweaning copper restriction and behavior in the Long-Evans rat.</b>	
THORNE, B. M., K.-N. LIN, M. L. WEAVER, B. N. WU and D. M. MEDEIROS .....	1041
<b>The effect of naloxone on intragastric ethanol self-administration.</b>	
SINDEN, J. D., P. MARFAING-JALLAT and J. LE MAGNEN .....	1045
<b>A simple and rapid technique for preparing histological sections of brain.</b>	
SHAPIRO, R. M., J. I. BADALAMENTI and S. D. GLICK .....	1049
<b>Fate of tritium derived from prenatally administered tritiated methadone in dams and neonatal rats.</b>	
LEVITT, M., D. E. HUTCHINGS and S. R. BODNARENKO .....	1051
 <i>ERRATUM</i> .....	1055
 <i>INDEX TO VOLUME 19</i> .....	1057

# PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 19 1983

SUBJECT INDEX

- Abuse liability, 149
  - intracranial stimulation
  - levonantradol
  - medial forebrain bundle
  - reward thresholds
- Acarbose
  - body weight, 71
  - carbohydrate absorption, 85
  - diet composition, 71
  - eating, 71, 85
  - obesity, 85
  - obesity, dietary, 71
  - strain differences, 85
- Acoustic startle reflex
  - blood pressure, 891
  - guinea pigs, 527
  - harmaline, 527
  - hydralazine, 891
  - pinna reflex, 527
  - sensory motor reactivity, 527
  - vertex potentials, 527
- Acquisition, repeat, 701
  - lever press
  - monkeys
  - multiple schedule
- Acrylamide, 635
  - histopathology
  - locomotor activity
- ACTH 4-10, 561
  - arginine vasopressin
  - morphine tolerance
  - retention
- Active avoidance, 655
  - passive avoidance
  - retention
  - strain differences
  - substance P
- Activity, 251
  - foot shock
  - pituitary-adrenal axis
  - stress, heat induced
- Activity, stress paradigm, 393
  - gastric ulcers
  - noradrenaline turnover
  - wheel running
- Acute ethanol treatment, 849
  - chronic ethanol treatment
  - CNS monoamines
- Adenosine, 23
  - appetite
  - eating
  - purines
- ADH release, 335
  - hypertonic sodium chloride
  - muscimol
  - route of administration
- Adipsia, 169
  - akinesia
  - aphagia
  - biphasic effects
  - catalepsy, spiperone-induced
  - lesions, globus pallidus
  - muscular rigidity
  - ptosis
- Adjunctive behavior, 385
  - drugs and culture
  - drug dependence
  - drugs and violence
- Adrenal cortex, 321
  - biogenic amines
  - drug interactions
  - pituitary-adrenal axis
- Adrenalectomy
  - butorphanol tartrate, 403
  - catecholamines, 373
  - drinking, 373
  - eating, 403
  - ethylketocyclazocine, 403
  - opiates, 403
  - renin-angiotensin, 373
- Adrenergic agents, 27
  - biochemical effects
  - locomotor activity
  - median raphe nucleus
  - microinjections
  - open field
  - serotonin metabolism
- Adrenergic blockers, 359
  - aggressive behavior
  - anticholinergic drugs
  - gastric secretion
  - stress ulcers, drug induced
- $\beta$ -Adrenergic receptors, 313
  - aggressive behavior
  - shock-induced fighting
- $\alpha$ -Adrenolytics, 19
  - apomorphine
  - dopamine
  - drug interactions
  - stereotypy
  - striatum
- Affective behavior, 33
  - amphetamine
  - animal model, affective psychosis
  - defensive flight
  - stereotypy
- Age differences, 687
  - ethanol
  - hypnosis
  - hypothermia
- Aggression
  - attack, 5
  - biting, 5
  - fixed ratio schedule, 5
  - immunoglobulin E (IgE), 883
  - irritability, 663
  - lever-press, 5
  - muricide, 663
  - muscimol, 663
  - response-independent shock, 5
  - squirrel monkeys, 5
  - stress, 883
- Aggressive behavior
  - adrenergic blockers, 359
  - $\beta$ -adrenergic receptors, 313
  - anticholinergic drugs, 359
  - gastric secretion, 359
  - shock-induced fighting, 313
  - stress ulcers, drug induced, 359
- Agonistic behavior, 645
  - ethanol
  - ethological analysis
  - social interactions
  - strain differences
- Akinesia, 169
  - adipsia
  - aphagia
  - biphasic effects
  - catalepsy, spiperone-induced
  - lesions, globus pallidus
  - muscular rigidity
  - ptosis
- Alcohol
  - ethanol, 683
  - jump test, 683
  - malnutrition, alcohol induced, 513
  - prenatal exposure, 513
  - selective breeding, 683
  - tolerance, 683
- Alcohol hypnosis, 131
  - central nervous system depression
  - genetic factors
  - prostaglandin synthesis
  - selective breeding
  - sex differences

- N-Allylnormetazocine, 737
  - eating
  - opiate receptors
  - SKF-10,047
- Alpha<sub>2</sub> adrenergic agonists, 345
  - kindling
  - nervous system
  - seizures, drug induced
- Alpha-adrenoceptors, 879
  - opioid receptors
  - writhing
- Alzheimer disease, 309
  - choline acetyltransferase
  - lesions, kainic acid
  - lesions, ventrolateral globus pallidus
  - memory
  - passive avoidance
- Aminopeptidases, 791
  - analgesia
  - leucine
  - neurotensin
- Amnesia, 733
  - aversion
  - memory mechanisms
- Amphetamine
  - affective behavior, 33
  - animal model, affective psychosis, 33
  - apomorphine, 57, 137
  - avoidance, 593
  - caffeine, 725
  - conditioned avoidance, 157
  - defensive flight, 33
  - discrimination, 205
  - dopaminergic mechanisms, 157
  - drug interaction, 725
  - exploration, 487, 497
  - extinction, 593
  - familiar cues, 187
  - fixed ratio schedule, 205
  - hyperactivity, 137, 187
  - lesions, electrolytic, 137
  - lesions, 6-hydroxydopamine, 137
  - lesions, nucleus accumbens, 137
  - LHRH, 157
  - locomotor activity, 137
  - methylphenidate, 725
  - morphine, 57
  - nisoxetine, 205
  - perseveration, 487, 497
  - play soliciting, juvenile rats, 725
  - preweanling treatment, 187
  - radial maze, 487, 497
  - rotation sensing device, 57
  - spontaneous motor activity, 157
  - stereotypy, 33, 57
- d-Amphetamine, 219
  - apomorphine
  - central amygdaloid nucleus
  - postsynaptic dopamine receptors
  - tolerance
- Amygdaloid complex, 759
  - antipsychotic drugs
  - catalepsy
  - drug interaction
- Analgesia
  - aminopeptidase, 791
  - antinociception, 79
  - caudal reticular formation, 79
  - clonidine, 447
  - cold water swim, 447
  - cyclic nucleotides, 79
  - drug interaction, 911
  - group housing, 679
  - hypothermia, 447
  - inbred mice, 939
  - isolated housing, 679
  - lesions, locus coeruleus, 447
  - leucine, 791
  - locomotor activity, 939
  - neurotensin, 791
  - nociceptive threshold, 79
  - pentazocine, 911
  - periaqueductal gray, 79
  - social isolation, 679
  - tail flick, 447
  - tripelennamine, 911
- Analysis, 729
  - behavioral data acquisition
  - microcomputer
- Animal model, 245
  - catalepsy
  - glycine
  - psychosis
  - serine
- Animal model, affective psychosis, 33
  - affective behavior
  - amphetamine
  - defensive flight
  - stereotypy
- Anticholinergic drugs, 359
  - adrenergic blockers
  - aggressive behavior
  - gastric secretion
  - stress ulcers, drug induced
- Anticonvulsants, 369
  - depression
  - GABA
  - human studies
- Antinociception, 79
  - analgesia
  - caudal reticular formation
  - cyclic nucleotides
  - nociceptive threshold
  - periaqueductal gray
- Antipsychotic drugs, 759
  - amygdaloid complex
  - catalepsy
  - drug interaction
- Anxiety
  - benzodiazepine antagonists, 39
  - convulsants, 39
  - GABA, 39
  - punishment, 225
  - RO 5-3663, 39
  - RO 15-1788, 39
  - serotonin, 225
  - substantia nigra, 225
- Anxiolytic action, 899
  - conflict behavior
  - diazepam
  - drug interactions
  - toulene exposure
- Aphagia, 169
  - adipsia
  - akinesia
  - biphasic effects
  - catalepsy, spiperone-induced
  - lesions, globus pallidus
  - muscular rigidity
  - ptosis
- Apomorphine
  - α-adrenolytics, 19
  - amphetamine, 57, 137
  - d-amphetamine, 219
  - caerulein, 969
  - central amygdaloid nucleus, 219
  - dibutyryl-cAMP, 969
  - dopamine, 19
  - dopaminergic activity, 49
  - dopamine receptor system, 153
  - dopaminergic supersensitivity, 199
  - drug interactions, 19
  - GABA receptor binding, 199
  - gastric peptides, 969
  - haloperidol, 199
  - hyperactivity, 137
  - lesions, electrolytic, 137
  - lesions, 6-hydroxydopamine, 49, 137
  - lesions, nucleus accumbens, 137
  - lesions, substantia nigra, 49
  - locomotor activity, 137, 153
  - morphine, 57
  - muscimol, 199
  - naloxone, 49
  - L-prolyl-L-leucyl-glycinamide, 49
  - postsynaptic dopamine receptors, 219
  - rotation sensing device, 57
  - stereotypy, 19, 49, 57, 153, 199
  - strain differences, 153
  - straitum, 19
  - tolerance, 219
- Apomorphine sensitivity, 1
  - drug discrimination
  - operant learning
- Apparatus
  - automated rotation measurement
    - device, 13
    - microcomputer, 729
    - radial maze, 487, 497
    - rotation sensing device, 57
    - shuttle avoidance, 423
- Appetite, 23
  - adenosine
  - eating
  - purines
- Arginine vasopressin, 561
  - ACTH 4-10
  - morphine tolerance
  - retention
- Attack, 5
  - aggression
  - biting
  - fixed ratio schedules
  - lever-press
  - response-independent shock
  - squirrel monkeys
- Audiogenicity, 839
  - barbiturate withdrawal
  - convulsions
  - epilepsy
- Auditory stimulus, 53
  - drinking
  - ethanol dependence
  - polydipsia, schedule-induced
  - withdrawal
- Auditory threshold, 431
  - human studies
  - hydrocortisone
  - neuroendocrine
  - perception
- Automated rotation measurement, 13
  - circling behavior
  - lesions, 6-hydroxydopamine
  - lesions, striatum
  - striatal dopaminergic system

- Aversion
  - amnesia, 733
  - ethanol, 441
  - memory mechanisms, 733
  - place conditioning, 441
- Avoidance
  - amphetamine, 593
  - catecholamines, 743
  - copper deficiency, 1041
  - dexamethasone, 599
  - drinking, 1041
  - escape latency, 423
  - extinction, 593
  - human studies, 1021
  - intertrial response, 423
  - lever press, 599
  - muricide, 1041
  - naloxone, 423
  - neonatal depletion, 743
  - nicotine, 1021
  - open field, 1041
  - opioid receptors, 423
  - pituitary adrenocortical system, 599
  - post shock motor suppression, 457
  - reinforcement schedule, 1021
  - self-administration, 1021
  - sex differences, 599
  - strain differences, 457
  - stress, 457
- Baboons, 993
  - drug reinforcement
  - nicotine
  - self-administration
- Barbiturates, 625
  - GABA
  - locomotor activity
  - self stimulation
- Barbiturate withdrawal, 839
  - audiogenicity
  - convulsions
  - epilepsy
- Beagle dogs, 1011
  - fixed ratio schedule
  - nicotine
  - squirrel monkeys
- Behavioral consequences, 1027
  - electric shock
  - nicotine
  - pharmacology
- Behavioral data acquisition, 729
  - analysis
  - microcomputer
- Benzodiazepines, 957
  - drug interaction
  - seizures
- Benzodiazepine antagonists
  - anxiety, 39
  - 3-carbomethoxy- $\beta$ -carboline, 951
  - convulsants, 39
  - exploration, 895
  - GABA, 39
  - locomotor activity, 895
  - RO 5-3663, 39
  - RO 15-1788, 39, 895
  - strain differences, 951
- Biochemical effects, 27
  - adrenergic agents
  - locomotor activity
  - median raphe nucleus
  - microinjections
  - open field
  - serotonin metabolism
- Biogenic amines, 321
  - adrenal cortex
  - drug interactions
  - pituitary-adrenal axis
- Biphasic effects, 169
  - adipsia
  - akinesia
  - aphagia
  - catalepsy, spiperone-induced
  - lesions, globus pallidus
  - muscular rigidity
  - ptosis
- Biting, 5
  - aggression
  - attack
  - fixed ratio schedule
  - lever-press
  - response-independent shock
  - squirrel monkeys
- Blackbirds, 857
  - discrimination
  - drinking
  - thermoregulation
- Blood pressure
  - acoustic startle, 891
  - heart rate, 365
  - hydralazine, 891
  - phencyclidine, 365
  - plasma prolactin, 365
- Body temperature, 103
  - choline uptake
  - chronic administration
  - muscarinic receptors
  - oxotremorine
  - rotarod performance
  - tolerance
- Body weight
  - acarbose, 71
  - catalepsy, 801
  - cocaine, 453
  - diet composition, 71
  - drinking, 821
  - eating, 71
  - estradiol stereoisomers, 801
  - food deprivation, 453
  - locomotor activity, 801, 821
  - obesity, dietary, 71
  - organ weight, 821
  - self-administration, 453
- Brain
  - adrenal medulla, 403
  - amygdala, 339, 345, 393, 543, 733, 759
  - basal ganglia, 393, 543
  - blood-brain barrier, 1037
  - brainstem, 527
  - caudal reticular formation, 79
  - central amygdaloid nucleus, 219
  - central nervous system, 97, 403, 567, 725
  - cerebellum, 121, 849
  - cerebral cortex, 393, 543, 849
  - cerebral ventricle, 477
  - cingulate cortex, 483
  - corpus striatum, 463
  - cortex, 121, 321, 587
  - dorsal noradrenergic bundle, 407
  - dorsal raphe nuclei, 351
  - globus pallidus, 169
  - hippocampus, 43, 63, 121, 393, 457, 543, 587, 849
  - hypothalamus, 393, 477, 543, 587, 795, 831, 849, 929, 945
  - lateral hypothalamus, 571
  - medial forebrain bundle, 149
  - medial hypothalamus, 301
  - medial prefrontal cortex, 211
  - median raphe nucleus, 27
  - mesencephalic central gray, 301
  - mesencephalic median, 351
  - mesolimbic, 807
  - midbrain, 393, 849, 929
  - midbrain reticular formation, 813
  - neocortex, 309
  - neostriatum, 693
  - nigrostriatal pathway, 57
  - nigro-striatum, 535
  - nucleus accumbens, 463, 693
  - nucleus accumbens septi, 137, 807
  - olfactory tubercle, 153
  - paraventricular nucleus, 945
  - periaqueductal gray, 79, 351
  - pituitary, 251, 321, 917
  - pons-medulla, 849
  - pons medulla oblongata, 393, 543
  - raphe nuclei, 177, 225
  - septum, 587, 635, 663
  - striatum, 13, 19, 63, 153, 231, 635, 807, 849
  - substantia nigra, 49, 199, 225
  - superior colliculus, 281, 813
  - thalamus, 543, 635, 849
  - ventral globus pallidus, 309
  - ventral noradrenergic bundle, 407
- Brain catecholamines, 407
  - conditioned emotional response
  - lesions, central noradrenergic bundle
  - open field
  - startle response
- Brightness discrimination, 43
  - fucokinase
  - fucosyltransferase
  - glycoprotein synthesis
  - hippocampus
  - L-fucose
- Buprenorphine, 985
  - ethanol
  - schedule induced self injection
- Buspirone, 97
  - central nervous system
  - discrimination
- Butorphanol, 577
  - eating
  - opiates
- Butorphanol tartrate, 403
  - adrenalectomy
  - eating
  - ethylketocyclazocine
  - opiates
- Caerulein, 969
  - apomorphine
  - dibutyryl-cAMP
  - gastric peptides
- Caffeine
  - amphetamine, 725
  - drug interaction, 725
  - kindled amygdaloid seizures, 339
  - methylphenidate, 725
  - play soliciting, juvenile rats, 725
  - seizure threshold, 339

- Carbohydrate absorption, 85
  - acarbose
  - eating
  - obesity
  - strain differences
- 3-Carbomethoxy- $\beta$ -carboline, 951
  - benzodiazepine
  - strain differences
- Cats, 827
  - emesis
  - motion sickness
  - naloxone
- Catalepsy
  - amygdaloid complex, 759
  - animal model, 245
  - antipsychotic drugs, 759
  - body weight, 801
  - drug interaction, 759
  - estradiol stereoisomers, 801
  - glycine, 245
  - locomotor activity, 801
  - psychosis, 245
  - serine, 245
- Catalepsy, spiperone-induced, 169
  - adipsia
  - akinesia
  - aphagia
  - biphasic effects
  - lesions, globus pallidus
  - muscular rigidity
  - ptosis
- Catecholamines
  - adrenalectomy, 373
  - avoidance, 743
  - convulsions, 973
  - drinking, 373
  - drug interaction, 831, 973
  - electroshock, 973
  - gastric ulcers, 831
  - lesions, hypothalamic, 831
  - neonatal depletion, 743
  - renin-angiotensin, 373
- Caudal reticular formation, 79
  - analgesia
  - antinociception
  - cyclic nucleotides
  - nociceptive threshold
  - periaqueductal gray
- Central amygdaloid nucleus, 219
  - d-amphetamine
  - apomorphine
  - postsynaptic dopamine receptors
  - tolerance
- Central nervous system, 97
  - buspirone
  - discrimination
- Central nervous system depression, 131
  - alcohol hypnosis
  - genetic factors
  - prostaglandin synthesis
  - selective breeding
  - sex differences
- Cerebrospinal fluid, 1037
  - delta sleep-inducing peptide
  - neurohormones
  - neuropeptides
- Cerebroventricular perfusates, 905
  - dopamine metabolites
  - 5-hydroxytryptamine metabolite
- Chickens
  - eating, 929
  - food deprivation, 929
  - glucose, 929
  - hyperthermia, 163
  - isolation housing, 163
  - opiates, 163
  - social isolation, 163
- Chlordiazepoxide
  - drug interaction, 275
  - ethanol preference, 275
  - operant behavior, 787
  - response force, 787
- Chlorimipramine, 193
  - chronic administration
  - exploratory behavior
  - locomotor activity
  - myoclonus
  - resting time
  - serotonin
- Choline acetyltransferase, 309
  - Alzheimer disease
  - lesions, kainic acid
  - lesions, ventrolateral globus pallidus
  - memory
  - passive avoidance
- Choline uptake, 103
  - body temperature
  - chronic administration
  - muscarinic receptors
  - oxotremorine
  - rotarod performance
  - tolerance
- Cholinergic drugs, 963
  - delayed match-to-sample
  - rhesus monkeys
  - short-term memory
- Cholinergic drug interaction, 63
  - dopamine receptors
  - genotypic variation
  - hippocampus
  - neuroleptics
  - striatum
- Cholinesterase inhibition, 1031
  - heat injury
  - hyperthermic exhaustion
  - malathion
- Chronic administration
  - body temperature, 103
  - chlorimipramine, 193
  - choline uptake, 103
  - exploratory behavior, 193
  - locomotor activity, 193
  - maprotiline, 719
  - muscarinic receptors, 103
  - myoclonus, 193
  - oxaprotiline, 719
  - oxotremorine, 103
  - resting time, 193
  - rotarod performance, 103
  - serotonin, 193
  - shock induced fighting, 719
  - tolerance, 103
- Chronic ethanol treatment, 849
  - acute ethanol treatment
  - CNS monoamines
- Cigarette smoking, 291
  - human studies
  - nicotine dependence
  - plasma cotinine
- Cingulate cortex, 483
  - gastric pathology
  - mucosal erosions
  - stimulation, electrical
- Circling behavior
  - automated rotation measurement, 13
  - dopamine, 231
  - drug interaction, 231
  - lesions, 6-hydroxydopamine, 13
  - lesions, striatum, 13
  - striatal dopaminergic system, 13
  - striatum, 231
- Clonazepam, 549
  - drug interaction
  - head twitches
  - muscle relaxation
- Clonidine
  - analgesia, 447
  - cold water swim, 447
  - EEG, 177
  - hypothermia, 447
  - lesions, electrolytic, 177
  - lesions, locus coeruleus, 447
  - lesions, raphe nuclei, 177
  - tail flick, 447
- CNS monoamines, 849
  - acute ethanol treatment
  - chronic ethanol treatment
- Cocaine
  - body weight, 453
  - discriminative stimulus properties, 145
  - food deprivation, 453
  - rhesus monkeys, 145
  - self-administration, 453
- Cold water swim, 447
  - analgesia
  - clonidine
  - hypothermia
  - lesions, locus coeruleus
  - tail flick
- Computerized animal observation, 765
  - microcomputer
  - videodigitizer
- Conditioned avoidance, 157
  - amphetamine
  - dopaminergic mechanisms
  - LHRH
  - spontaneous motor activity
- Conditioned emotional response, 407
  - brain catecholamines
  - lesions, central noradrenergic bundle
  - open field
  - startle response
- Conditioned fear, 379
  - heart rate conditioning
  - opiates
  - rabbits
- Conditioned response, 327
  - morphine
  - thermoregulation
  - tolerance
- Conditioned taste aversion
  - CRF, 771
  - deuterium substitution, 471
  - eating, 771
  - motor activity, 471
  - $\beta$ -phenylethylamine, 471
  - sauvagine, 771
- Conflict behavior, 899
  - anxiolytic action
  - diazepam
  - drug interactions
  - toulene exposure
- Convulsants, 39
  - anxiety

- benzodiazepine antagonists
- GABA
- RO 5-3663
- RO 15-1788
- Convulsions
  - audiogenicity, 839
  - barbiturate withdrawal, 839
  - catecholamines, 973
  - drug interaction, 973
  - electroshock, 973
  - epilepsy, 839
- Copper deficiency, 1041
  - avoidance
  - drinking
  - muricide
  - open field
- Corpus striatum, 463
  - muscle tone
  - nucleus accumbens
  - reserpine rigidity
- CRF, 771
  - conditioned taste aversion
  - eating
  - sauvagine
- Cyclic AMP, 535
  - dopamine receptors
  - drug interaction
  - lesions, nigro-striatal pathway
  - pharmacokinetics
  - rotation behavior
- Cyclic nucleotides, 79
  - analgesia
  - antinociception
  - caudal reticular formation
  - nociceptive threshold
  - periaqueductal gray
- Defensive flight, 33
  - affective behavior
  - amphetamine
  - animal model, affective psychosis
  - stereotypy
- Delayed match-to-sample, 963
  - cholinergic drugs
  - rhesus monkeys
  - short-term memory
- Delta sleep-inducing peptide, 1037
  - cerebrospinal fluid
  - neurohormones
  - neuropeptides
- Depression, 369
  - anticonvulsants
  - GABA
  - human studies
- Deuterium substitution, 471
  - conditioned taste aversion
  - motor activity
  - $\beta$ -phenylethylamine
- Dexamethasone, 599
  - avoidance
  - lever press
  - pituitary-adrenocortical system
  - sex differences
- Diazepam
  - anxiolytic action, 899
  - conflict behavior, 899
  - drug interactions, 899
  - EMG activity, 715
  - power spectral analysis, 715
  - sleep-wake cycle, 715
  - toulene exposure, 899
- Dibutyryl-cAMP, 969
  - apomorphine
  - caerulein
  - gastric peptides
- Diet composition, 71
  - acarbose
  - body weight
  - eating
  - obesity, dietary
- Diet deficiency, 115
  - drinking
  - eating
  - essential fatty acids
  - ethanol metabolism
  - ethanol tolerance
- Dipsogenesis, serotonin-induced, 519
  - drinking
  - drug interaction
  - 5-hydroxytryptophan
- Discrimination
  - amphetamine, 205
  - blackbirds, 857
  - busprione, 97
  - central nervous system, 97
  - drinking, 857
  - drug interaction, 415
  - fixed ratio schedule, 205
  - nisoxetine, 205
  - operant behavior, 415
  - thermoregulation, 857
- Discriminative stimulus properties, 145
  - cocaine
  - rhesus monkeys
- Dopamine
  - $\alpha$ -adrenolytics, 19
  - apomorphine, 19
  - circling behavior, 231
  - drug interaction, 19, 231
  - extinction, 867
  - receptor affinities, 867
  - self-stimulation, 867
  - stereotypy, 19
  - striatum, 19, 231
- Dopamine metabolism, 427
  - seizures, post decapitation
  - spinal cord
- Dopamine metabolites, 905
  - cerebroventricular perfusates
  - 5-hydroxytryptamine metabolite
- Dopamine receptor system, 153
  - apomorphine
  - locomotor activity
  - stereotypy
  - strain differences
- Dopamine receptors
  - cholinergic drug interaction, 63
  - cyclic AMP, 535
  - drug interaction, 535
  - genotypic variation, 63
  - hippocampus, 63
  - lesions, nigro-striatal pathway, 535
  - neuroleptics, 63
  - pharmacokinetics, 535
  - prefrontal cortex, 211
  - rotation behavior, 535
  - self-stimulation, 211
  - spontaneous motor activity, 211
  - striatum, 63
- Dopaminergic activity, 49
  - apomorphine
  - lesions, 6-hydroxydopamine
  - lesions, substantia nigra
- naloxone
- L-prolyl-L-leucyl-glycinamide
- stereotypy
- Dopaminergic mechanisms, 157
  - amphetamine
  - conditioned avoidance
  - LHRH
  - spontaneous motor activity
- Dopaminergic supersensitivity, 199
  - apomorphine
  - GABA receptor binding
  - haloperidol
  - muscimol
  - stereotypy
- Dopaminergic transmission, 567
  - ethanol
  - fetal alcohol syndrome
- Drinking
  - adrenalectomy, 373
  - auditory stimulus, 53
  - avoidance, 1041
  - blackbirds, 857
  - body weight, 821
  - catecholamines, 373
  - copper deficiency, 1041
  - diet deficiency, 115
  - dipsogenesis, serotonin-induced, 519
  - discrimination, 857
  - drug interaction, 519
  - eating, 115, 235
  - energy balance, 571
  - essential fatty acids, 115
  - ethanol, 571, 1045
  - ethanol dependence, 53
  - ethanol metabolism, 115
  - ethanol tolerance, 115
  - 5-hydroxytryptophan, 519
  - lever press, 843
  - locomotor activity, 821
  - meal size, 235
  - metabolism, 571
  - minimum-interreinforcer interval, 843
  - muricide, 1041
  - nalmefene, 235
  - naloxone, 1045
  - open field, 1041
  - opioid antagonists, 235
  - opiates, 505
  - organ weight, 821
  - renin-angiotensin, 373
  - schedule-induced polydipsia, 53, 505
  - self-administration, ethanol, 843
  - stimulation, electrical, 571
  - thermoregulation, 857
  - withdrawal, 53
- Drug
  - acarbose, 71, 85
  - aceperone, 19
  - acetazolamide, 625
  - acetylcholine, 813
  - acrylamide, 635
  - adenine, 23
  - adenosine, 23, 535
  - adenosine monophosphate, 23
  - alcohol, 5, 683
  - N-allylnormetazocine, 737
  - N-(4-hydroxyphenacetyl)-4-aminoclonidine, 879
  - amitriptyline, 751
  - amitryptaline, 415
  - ammonium chloride, 553

amphetamine, 57, 187, 231, 263, 327, 487, 497, 593, 725, 831  
 d-amphetamine, 5, 145, 157, 205, 219, 635  
 d-amphetamine sulfate, 33, 137  
 apomorphine, 1, 19, 49, 57, 63, 137, 153, 169, 199, 211, 219, 327, 463, 535, 807, 917, 969  
 atropine, 477, 483, 577, 719, 963  
 atropine methylbromide, 359  
 baclofen, 281  
 benactyzine, 963  
 benperidol, 867  
 benzodiazepine, 625  
 bicuculline, 335  
 bremazocine, 863  
 bromocriptine, 211  
 buspirone, 97  
 butaclamol, 477  
 caffeine, 5, 339, 535, 725  
 capsaicin, 857  
 carbachol, 813  
 carbamylcholine, 103  
 3-carbomethoxy- $\beta$ -carboline, 951  
 l-cathinone, 145  
 chlordiazepoxide, 5, 39, 275, 415, 625, 787, 957  
 chlorimipramine, 193  
 chlorpromazine, 5, 321, 755, 759, 831, 869  
 $\beta$ -chlornaltrexamine, 939  
 cimetidine, 483  
 cinanserin, 519  
 clonazepam, 549, 625  
 clonidine, 27, 117, 447, 519, 879, 891, 957  
 clorgyline, 263  
 clozapine, 759, 831, 867  
 cocaine, 5, 145, 453, 887, 993  
 CGS 8216, 549  
 cyclazocine, 701  
 cycloheximide, 733  
 2-deoxyguanosine, 23  
 2-deoxyinosine, 23  
 desipramine, 121, 415, 419, 831, 973  
 desmethylimipramine, 743, 751  
 dexamethasone, 251, 599  
 dextrorphan, 609  
 diazepam, 5, 23, 369, 715, 755, 899, 951, 957  
 dibutyl cyclic adenosine monophosphate, 79  
 dibutyl cyclic guanosine monophosphate, 79  
 diethylstilbestrol, 617  
 5,7-dihydroxytryptamine, 225, 905, 973  
 diprenorphine, 505  
 L-DOPA, 263  
 dopamine, 63, 121, 231, 463, 593, 693, 743, 781, 807, 867  
 DSP4, 121  
 EGTA, 477  
 EHNA, 535  
 estradiol benzoate, 351  
 ethanol, 53, 115, 131, 275, 441, 513, 567, 571, 583, 645, 683, 687, 755, 843, 849, 1045  
 ethyleneglycol-bis-( $\beta$ -amino-ethyl ether), 231  
 ethylketazocine, 863  
 ethylketocyclazocine, 771  
 fentanyl, 863  
 fluoxetine, 193  
 $\beta$ -funaltrexamine, 939  
 GABA, 951  
 glycine, 245  
 haloperidol, 63, 199, 313, 577, 759, 831, 867  
 halothane, 231  
 harmaline, 527  
 heroin, 701  
 hexamethonium, 359  
 histamine, 587, 925  
 homotaurine, 625  
 hydrocortisone, 431  
 6-hydroxydopamine, 13, 49, 137, 359, 743, 905, 973  
 5-hydroxytryptamine, 873  
 5-hydroxytryptophan, 519  
 imipramine, 415, 751  
 indoleamine, 527  
 indomethacin, 131  
 inosine, 23  
 isoproterenol, 519, 831  
 isotonic glucose, 929  
 kainic acid, 169  
 ketocyclazocine, 711  
 LAAM, 701  
 lergotril, 211  
 leucine, 791  
 levonantradol, 149  
 lithium chloride, 257  
 malathion, 1031  
 maprotiline, 719  
 mecamylamine, 813  
 5-McODMT, 873  
 metergoline, 663, 873  
 methadone, 701  
 7-methyl-inosine, 23  
 methylphenidate, 725  
 methysergide, 193, 477, 519, 549  
 metoclopramide, 867  
 metoprolol, 313  
 metrazol, 625  
 mianserin, 873  
 morphine, 5, 57, 163, 301, 327, 397, 427, 435, 561, 609, 679, 711, 863, 873, 879, 887, 921, 939  
 morphine sulphate, 269, 777  
 muscimol, 199, 231, 281, 335, 663  
 nalmefene, 235  
 naloxazone, 939  
 naloxone, 49, 163, 397, 403, 423, 505, 609, 671, 679, 795, 827, 863, 873, 879, 921, 1045  
 naltrexone, 397, 505  
 nicotine, 5, 145, 291, 553, 559, 605, 887, 989, 993, 1005, 1011, 1021, 1027  
 nisoxetine, 205  
 noradrenaline, 719  
 l-noradrenaline, 693  
 norepinephrine, 313, 593, 733, 743, 891  
 6-OHDA, 883  
 oxazepam, 97  
 oxaprotiline, 719  
 oxcarbazepine, 369  
 oxotremorine, 103  
 pargyline, 263, 321  
 pentazocine, 911  
 pentobarbital, 97, 145, 205, 415, 755  
 pentylenetetrazol, 587, 957  
 phencyclidine, 365  
 phenobarbital, 5  
 phenoxybenzamine, 19, 27, 891  
 phenolamine, 27, 359, 477, 831  
 phenylephrine, 27  
 phenylethylamine, 263  
 N<sup>6</sup>phenylisopropyl-adenosine, 535  
 8-phenyl-theophylline, 535  
 phenytoin, 415, 625  
 physostigmine, 813, 963  
 picrotoxin, 231, 625  
 pilocarpine, 231  
 pimozone, 211, 759, 867  
 pindolol, 313  
 pranolol, 519  
 probenecid, 543  
 procaine, 145  
 promazine, 867  
 promethazine, 719  
 propranolol, 27, 313, 419, 733, 831  
 prostaglandin E<sub>2</sub>, 231  
 quipazine, 419, 663  
 RDS-127, 781  
 reserpine, 321, 463  
 rolipram, 535  
 RO 5-3663, 39  
 RO 15-1788, 39, 549, 895  
 salbutamol, 27  
 scopolamine, 231, 725, 813  
 SC-19220, 131  
 serine, 245  
 serotonin, 415, 519, 663  
 sodium barbital, 839  
 sodium bicarbonate, 553  
 sodium chloride, 335  
 spiperone, 169  
 spiroperidol, 211, 807, 867  
 sulpiride, 63, 211  
 testosterone propionate, 617  
 N,N'-tetraacetic acid, 231  
 THC, 755  
 theophylline, 535  
 thioridazine, 759, 867  
 THIP, 281, 369  
 toluene, 899, 933  
 tripeleminamine, 821, 911  
 tritiated methadone, 1051  
 L-tryptophan, 905  
 tyrosine hydroxylase, 807  
 valproate, 369, 625  
 xylazine, 345, 879  
 yohimbine, 27, 879  
**Drug dependence, 385**  
 adjunctive behavior  
 drugs and culture  
 drugs and violence  
**Drug discrimination**  
 apomorphine sensitivity, 1  
 operant learning, 1  
 tricyclic anti-depressants, 751  
**Drug interactions**  
 adrenal cortex, 321  
 $\alpha$ -adrenolytics, 19  
 amphetamine, 725  
 amygdaloid complex, 759  
 analgesia, 911  
 antipsychotic drugs, 759  
 anxiolytic action, 899  
 apomorphine, 19  
 benzodiazepines, 957  
 biogenic amines, 321  
 caffeine, 725  
 catalepsy, 759  
 catecholamines, 831, 973  
 chlordiazepoxide, 275



- circling behavior, 231
- clonazepam, 549
- conflict behavior, 899
- convulsions, 973
- cyclic AMP, 535
- diazepam, 899
- dipsogenesis, serotonin-induced, 519
- discrimination, 415
- dopamine, 19, 231
- dopamine receptors, 535
- drinking, 519
- DSP4, 121
- eating, 121
- electroshock, 973
- ethanol preference, 275
- fixed interval, 553
- gastric ulcers, 831
- head twitches, 549
- histamine, 587
- 5-hydroxytryptophan, 519
- lesions, hypothalamic, 831
- lesions, nigro-striatal pathway, 535
- locomotor activity, 693
- locus coeruleus-noradrenaline system, 121
- methylphenidate, 725
- monoamine oxidase, 263
- morphine, 873
- motor activity, 121, 263
- muscle relaxation, 549
- nicotine, 553
- nociception, 873
- nonpharmacological influence, 755
- open field, 693
- operant behavior, 415
- oxytocin, 587
- pentazocine, 911
- pentylentetrazol, 587
- pharmacokinetics, 535
- pituitary-adrenal axis, 321
- play soliciting, juvenile rats, 725
- propranolol, 419
- psychoactive drugs, 755
- quipazine, 419
- rotation behavior, 535, 813
- seizures, 957
- serotonin antagonists, 873
- shock-elicited fighting, 419
- squirrel monkeys, 553
- stereotypy, 19
- stimulus shock termination, 553
- striatum, 19, 231
- superior colliculus, 813
- T maze, 121
- toulene exposure, 899
- tripelennamine, 911
- vasopressin, 587
- wet dog shakes, 813
- Drug reinforcement, 993
  - baboons
  - nicotine
  - self-administration
- Drugs and culture, 385
  - adjunctive behavior
  - drug dependence
  - drugs and violence
- Drugs and violence, 385
  - adjunctive behavior
  - drugs and culture
  - drug dependence
- DSP4, 121
  - drug interaction
- eating
  - locus coeruleus-noradrenaline system
  - motor activity
  - T maze
- Eating
  - acarbose, 71, 85
  - adenosine, 23
  - adrenalectomy, 403
  - N-allylnormetazocine, 737
  - appetite, 23
  - body weight, 71
  - butorphanol, 577
  - butorphanol tartrate, 403
  - carbohydrate absorption, 85
  - chickens, 929
  - conditioned taste aversion, 771
  - CRF, 771
  - diet composition, 71
  - diet deficiency, 115
  - drinking, 115, 235
  - drug interaction, 121
  - DSP4, 121
  - essential fatty acids, 115
  - ethanol, 1045
  - ethanol metabolism, 115
  - ethanol tolerance, 115
  - ethylketocyclazocine, 403
  - food deprivation, 929
  - glucose, 929
  - gonadal steroids, 617
  - lesions, hypothalamus, 945
  - locus coeruleus-noradrenaline system, 121
  - meal size, 235
  - motor activity, 121
  - nalmefene, 235
  - naloxone, 1045
  - norepinephrine, 945
  - obesity, 85, 617
  - obesity, dietary, 71
  - opiates, 403, 577
  - opiate receptors, 737
  - opioid antagonists, 235
  - purines, 23
  - sauvagine, 771
  - SKF-10,047, 737
  - strain differences, 85
  - T maze, 121
  - white leghorn cocks, 617
- EEG, 177
  - clonidine
  - lesions, electrolytic
  - lesions, raphe nuclei
- Electric shock, 1027
  - behavioral consequences
  - nicotine
  - pharmacology
- Electroshock, 973
  - catecholamines
  - convulsions
  - drug interaction
- Emesis, 827
  - cats
  - motion sickness
  - naloxone
- EMG activity, 715
  - diazepam
  - power spectral analysis
  - sleep-wake cycle
- Endogenous opioids, 795
  - LHRH
  - lordosis
  - stress, shock induced
- Endorphins, 671
  - locomotor activity
- Energy balance, 571
  - drinking
  - ethanol
  - metabolism
  - stimulation, electrical
- Epilepsy, 839
  - audiogenicity
  - barbiturate withdrawal
  - convulsions
- Escape, 301
  - mesencephalic central gray
  - microinjections
  - morphine
  - nociceptive stimuli
  - stimulation, electrical
- Escape latency, 423
  - avoidance
  - intertrial response
  - naloxone
  - opioid receptors
- Essential fatty acids, 115
  - diet deficiency
  - drinking
  - eating
  - ethanol metabolism
  - ethanol tolerance
- Estradiol stereoisomers, 801
  - body weight
  - catalepsy
  - locomotor activity
- Estrous cycle, 583
  - ethanol
  - ovarian function
- Ethanol
  - age differences, 687
  - agonistic behavior, 645
  - alcohol, 683
  - aversion, 441
  - buprenorphine, 985
  - dopaminergic transmission, 567
  - drinking, 571, 1045
  - eating, 1045
  - energy balance, 571
  - estrous cycle, 583
  - ethological analysis, 645
  - fetal alcohol syndrome, 567
  - hypnosis, 687
  - hypothermia, 687
  - jump test, 683
  - metabolism, 571
  - naloxone, 1045
  - ovarian function, 583
  - place conditioning, 441
  - schedule induced self injection, 985
  - selective breeding, 683
  - social interactions, 645
  - stimulation, electrical, 571
  - strain differences, 645
  - tolerance, 683
- Ethanol dependence, 53
  - auditory stimulus
  - drinking
  - polydipsia, schedule-induced
  - withdrawal
- Ethanol metabolism, 115
  - diet deficiency

- drinking
- eating
- essential fatty acids
- ethanol tolerance
- Ethanol preference
  - chlordiazepoxide, 275
  - drug interaction, 275
  - toluene preference, 933
- Ethanol tolerance, 115
  - diet deficiency
  - drinking
  - eating
  - essential fatty acids
  - ethanol metabolism
- Ethological analysis, 645
  - agonistic behavior
  - ethanol
  - social interactions
  - strain differences
- Ethylketocyclazocine
  - adrenalectomy, 403
  - butorphanol tartrate, 403
  - eating, 403
  - ketocyclazocine, 711
  - opiates, 403
  - opioid agonists, 711
  - physical dependence, 711
  - self-administration, 711
- Exploration
  - amphetamine, 487, 497
  - benzodiazepine antagonist, 895
  - chlorimipramine, 193
  - chronic administration, 193
  - locomotor activity, 193
  - myoclonus, 193
  - perseveration, 487, 497
  - radial maze, 487, 497
  - resting time, 193
  - Ro15-1788, 895
  - serotonin, 193
- Extinction
  - amphetamine, 593
  - avoidance, 593
  - dopamine, 867
  - receptor affinities, 867
  - self-stimulation, 867
- Familiar cues, 187
  - amphetamine
  - hyperactivity
  - preweanling treatment
- Feminization, 777
  - morphine sulfate
  - neuralestrogen receptors
  - prenatal exposure, female rats
- Fetal alcohol syndrome, 567
  - dopaminergic transmission
  - ethanol
- Fixed-interval schedule, 555
  - drug interaction
  - nicotine
  - squirrel monkeys
  - stimulus shock termination
- Fixed ratio schedule
  - aggression, 5
  - amphetamine, 205
  - attack, 5
  - beagle dogs, 1011
  - biting, 5
  - discrimination, 205
  - lever-press, 5
- nicotine, 1011
- nisooxetine, 205
- response-independent shock, 5
- squirrel monkeys, 5, 1011
- Food deprivation
  - body weight, 453
  - chickens, 929
  - cocaine, 453
  - eating, 929
  - glucose, 929
  - self-administration, 453
- Foot shock, 251
  - activity
  - pituitary-adrenal axis
  - stress, heat induced
- Fucokinase, 43
  - brightness discrimination
  - fucosyltransferase
  - glycoprotein synthesis
  - hippocampus
  - L-fucose
- L-Fucose, 43
  - brightness discrimination
  - fucokinase
  - fucosyltransferase
  - glycoprotein synthesis
  - hippocampus
- Fucosyltransferase, 43
  - brightness discrimination
  - fucokinase
  - glycoprotein synthesis
  - hippocampus
  - L-fucose
- GABA
  - anticonvulsants, 369
  - anxiety, 39
  - barbiturates, 625
  - benzodiazepine antagonists, 39
  - convulsants, 39
  - depression, 369
  - human studies, 369
  - locomotor activity, 625
  - RO 5-3663, 39
  - RO 15-1788, 39
  - self stimulation, 625
- GABA agonist, 281
  - stimulation, tactile
  - superior colliculus
- GABA receptor binding, 199
  - apomorphine
  - dopaminergic supersensitivity
  - haloperidol
  - muscimol
  - stereotypy
- Gastric pathology, 483
  - cingulate cortex
  - mucosal erosions
  - stimulation, electrical
- Gastric peptides, 969
  - apomorphine
  - caerulein
  - dibutyl-cAMP
- Gastric secretion, 359
  - adrenergic blockers
  - aggressive behavior
  - anticholinergic drugs
  - stress ulcers, drug induced
- Gastric ulcers
  - activity, stress paradigm, 393
  - catecholamines, 831
- drug interactions, 831
- histamine, 925
- lesions, hypothalamic, 831
- noradrenaline turnover, 393
- somatostatin, 925
- stimulation, vagal, 925
- wheel running, 393
- Genetic factors, 131
  - alcohol hypnosis
  - central nervous system depression
  - prostaglandin synthesis
  - selective breeding
  - sex differences
- Genital grooming, 917
  - hypomotility
  - locomotor activity
  - penile erection
- Genotypic variation, 63
  - cholinergic drug interaction
  - dopamine receptors
  - hippocampus
  - neuroleptics
  - striatum
- Glucose, 929
  - chickens
  - eating
  - food deprivation
- Glycine, 245
  - animal model
  - catalepsy
  - psychosis
  - serine
- Glycoprotein synthesis, 43
  - brightness discrimination
  - fucokinase
  - fucosyltransferase
  - hippocampus
  - L-fucose
- Gonadal steroids, 617
  - eating
  - obesity
  - white leghorn cocks
- Group housing, 679
  - analgesia
  - isolated housing
  - social isolation
- Guinea pigs, 527
  - acoustic startle reflex
  - harmaline
  - pinna reflex
  - sensory motor reactivity
  - vertex potentials
- Haloperidol, 199
  - apomorphine
  - dopaminergic supersensitivity
  - GABA receptor binding
  - muscimol
  - stereotypy
- Hamsters, 435
  - locomotor activity
  - morphine
  - sensitization
  - tolerance
- Harmaline, 527
  - acoustic startle reflex
  - guinea pigs
  - pinna reflex
  - sensory motor reactivity
  - vertex potentials

- Head twitches, 549
  - clonazepam
  - drug interaction
  - muscle relaxation
- Heart rate, 365
  - blood pressure
  - phencyclidine
  - plasma prolactin
- Heart rate conditioning, 379
  - conditioned fear
  - opiates
  - rabbits
- Heat injury, 1031
  - cholinesterase inhibition
  - hyperthermic exhaustion
  - malathion
- Hippocampus
  - brightness discrimination, 43
  - cholinergic drug interaction, 63
  - dopamine receptors, 63
  - fucokinase, 43
  - L-fucose, 43
  - fucosyltransferase, 43
  - genotypic variation, 63
  - glycoprotein synthesis, 43
  - neuroleptics, 63
  - striatum, 63
- Histamine
  - drug interaction, 587
  - gastric ulcer, 925
  - oxytocin, 587
  - pentylentetrazol, 587
  - somatostatin, 925
  - stimulation, vagal, 925
  - vasopressin, 587
- Histological sectioning, 1049
  - staining
- Histopathology, 635
  - acrylamide
  - locomotor activity
- Honeybees, 921
  - morphine
  - naloxone
- Hormone
  - corticosterone, 251, 321
  - insulin, 85
  - LHRH, 157
  - noradrenaline, 27
  - pregnant mares serum gonadotrophin, 269
  - progesterone, 269
  - prostaglandin, 131
- Human studies
  - anticonvulsants, 369
  - auditory threshold, 431
  - avoidance, 291, 1021
  - cigarette smoking, 291
  - depression, 369
  - GABA, 369
  - hydrocortisone, 431
  - neuroendocrine, 431
  - nicotine, 887, 989, 1021
  - nicotine dependence, 291
  - perception, 431
  - plasma cotinine, 291
  - reinforcement schedule, 989, 1021
  - self-administration, 989, 1021
- Hydralazine, 891
  - acoustic startle
  - blood pressure
- Hydrocortisone, 431
  - auditory threshold
- human studies
  - neuroendocrine
  - perception
- 5-Hydroxytryptamine metabolite, 905
  - cerebroventricular perfusates
  - dopamine metabolites
- 5-Hydroxytryptophan, 519
  - dipsogenesis, serotonin-induced
  - drinking
  - drug interaction
- Hyperactivity
  - amphetamine, 137, 187
  - apomorphine, 137
  - familiar cues, 187
  - immunoreactivity, 979
  - lesions, electrolytic, 137
  - lesions, 6-hydroxydopamine, 137
  - lesions, nucleus accumbens, 137
  - locomotor activity, 137, 979
  - preweaning treatment, 187
  - radiation exposure, 979
- Hypersensitivity, 807
  - hypophysectomy
  - hyposensitivity
- Hyperthermia, 163
  - chickens
  - isolation housing
  - opiates
  - social isolation
- Hyperthermic exhaustion, 1031
  - cholinesterase inhibition
  - heat injury
  - malathion
- Hypertonic sodium chloride, 335
  - ADH release
  - muscimol
  - route of administration
- Hypnosis, 687
  - age differences
  - ethanol
  - hypothermia
- Hypomotility, 917
  - genital grooming
  - locomotor activity
  - penile erection
- Hypophysectomy, 807
  - hypersensitivity
  - hyposensitivity
- Hyposensitivity, 807
  - hypersensitivity
  - hypophysectomy
- Hypothermia
  - age differences, 687
  - analgesia, 447
  - clonidine, 447
  - cold water swim, 447
  - ethanol, 687
  - hypnosis, 687
  - lesions, locus coeruleus, 447
  - lithium chloride, 257
  - pharmacodynamics, 257
  - strain differences, 257
  - tail flick, 447
  - toxicity, 257
- Immobilization, 543
  - MHPG-SO<sub>4</sub>
  - noradrenaline release
- Immunoglobulin E (IgE), 883
  - aggression
  - stress
- Immunoreactivity, 979
  - hyperactivity
  - locomotor activity
  - radiation exposure
- Inbred mice, 939
  - analgesia
  - locomotor activity
- Intertrial response, 423
  - avoidance
  - escape latency
  - naloxone
  - opioid receptors
- Intracranial stimulation, 149
  - abuse liability
  - levonantradol
  - medial forebrain bundle
  - reward thresholds
- Irritability, 663
  - aggression
  - muricide
  - muscimol
- Isolation housing
  - analgesia, 679
  - chickens, 163
  - group housing, 679
  - hyperthermia, 163
  - opiates, 163
  - social isolation, 163, 679
- Jump test, 683
  - alcohol
  - ethanol
  - selective breeding
  - tolerance
- Ketocyclazocine, 711
  - ethylketocyclazocine
  - opioid agonists
  - physical dependence
  - self-administration
- Kindled amygdaloid seizures, 339
  - caffeine
  - seizure threshold
- Kindling, 345
  - alpha<sub>2</sub> adrenergic agonists
  - nervous system
  - seizures, drug induced
- Lesions, central noradrenergic bundle, 407
  - brain catecholamines
  - conditioned emotional response
  - open field
  - startle response
- Lesions, electrolytic
  - amphetamine, 137
  - apomorphine, 137
  - clonidine, 177
  - EEG, 177
  - hyperactivity, 137
  - lesions, 6-hydroxydopamine, 137
  - lesions, nucleus accumbens, 137
  - lesions, raphe nuclei, 177
  - locomotor activity, 137
- Lesions, globus pallidus, 169
  - adipsia
  - akinesia
  - aphagia
  - biphasic effects
  - catalepsy, spiperone-induced

- muscular rigidity
- ptosis
- Lesions, 6-hydroxydopamine
  - amphetamine, 137
  - apomorphine, 49, 137
  - automated rotation measurement, 13
  - circling behavior, 13
  - dopaminergic activity, 49
  - hyperactivity, 137
  - lesions, electrolytic, 137
  - lesions, nucleus accumbens, 137
  - lesions, striatum, 13
  - lesions, substantia nigra, 49
  - locomotor activity, 137
  - naloxone, 49
  - L-prolyl-L-leucyl-glycinamide, 49
  - stereotypy, 49
  - striatal dopaminergic system, 13
- Lesions, hypothalamic
  - catecholamines, 831
  - drug interactions, 831
  - eating, 945
  - gastric ulcers, 831
  - norepinephrine, 945
- Lesions, kainic acid, 309
  - Alzheimer disease
  - choline acetyltransferase
  - lesions, ventrolateral globus pallidus
  - memory
  - passive avoidance
- Lesions, locus coeruleus, 447
  - analgesia
  - clonidine
  - cold water swim
  - hypothermia
  - tail flick
- Lesions, nigro-striatal pathway, 535
  - cyclic AMP
  - dopamine receptors
  - drug interactions
  - pharmacokinetics
  - rotation behavior
- Lesions, nucleus accumbens, 137
  - amphetamine
  - apomorphine
  - hyperactivity
  - lesions, electrolytic
  - lesions, 6-hydroxydopamine
  - locomotor activity
- Lesions, raphe nuclei, 177
  - clonidine
  - EEG
  - lesions, electrolytic
- Lesions, striatum, 13
  - automated rotation measurement
  - circling behavior
  - lesions, 6-hydroxydopamine
  - striatal dopaminergic system
- Lesions, substantia nigra, 49
  - apomorphine
  - dopaminergic activity
  - lesions, 6-hydroxydopamine
  - naloxone
  - L-prolyl-L-leucyl-glycinamide
  - stereotypy
- Lesions, ventrolateral globus pallidus, 309
  - Alzheimer disease
  - choline acetyltransferase
  - lesions, kainic acid
  - memory
  - passive avoidance
- Leucine, 791
  - aminopeptidase
  - analgesia
  - neurotensin
- Lever press
  - acquisition, repeat, 701
  - aggression, 5
  - attack, 5
  - avoidance, 599
  - biting, 5
  - dexamethasone, 599
  - drinking, 843
  - fixed ratio schedule, 5
  - minimum-interreinforcer interval, 843
  - monkeys, 701
  - multiple schedule, 701
  - pituitary adrenocortical system, 599
  - response-independent shock, 5
  - self-administration, ethanol, 843
  - sex differences, 599
  - squirrel monkeys, 5
- Levonantradol, 149
  - abuse liability
  - intracranial stimulation
  - medial forebrain bundle
  - reward thresholds
- LHRH
  - amphetamine, 157
  - conditioned avoidance, 157
  - dopaminergic mechanisms, 157
  - endogenous opioids, 795
  - lordosis, 795
  - spontaneous motor activity, 157
  - stress, shock induced, 795
- Lithium chloride, 257
  - hypothermia
  - pharmacodynamics
  - strain differences
  - toxicity
- Locomotor activity
  - acrylamide, 635
  - adrenergic agents, 27
  - amphetamine, 137
  - analgesia, 939
  - apomorphine, 137
  - barbiturates, 625
  - benzodiazepine antagonist, 895
  - biochemical effects, 27
  - body weight, 801, 821
  - catalepsy, 801
  - chlorimipramine, 193
  - chronic administration, 193
  - dopamine receptor, 153
  - drinking, 821
  - drug interaction, 693
  - endorphins, 671
  - estradiol stereoisomers, 801
  - exploratory behavior, 193, 895
  - GABA, 625
  - genital grooming, 917
  - hamsters, 435
  - histopathology, 635
  - hyperactivity, 137, 979
  - hypomotility, 917
  - immunoreactivity, 979
  - inbred mice, 939
  - lesions, electrolytic, 137
  - lesions, 6-hydroxydopamine, 137
  - lesions, nucleus accumbens, 137
  - median raphe nucleus, 27
  - microinjections, 27
  - morphine, 435
- myoclonus, 193
- open field, 27, 693
- organ weight, 821
- penile erection, 917
- radiation exposure, 979
- RDS-127, 781
- resting time, 193
- RO15-1788, 895
- self stimulation, 625
- seminal emission, 781
- sensitization, 435
- serotonin, 193
- serotonin metabolism, 27
- sexual behavior, male rats, 781
- stereotypy, 153
- strain differences, 153
- tolerance, 435
- Locus coeruleus-noradrenaline system, 121
  - drug interaction
  - DSP4
  - eating
  - motor activity
  - T maze
- Lordosis
  - endogenous opioids, 795
  - LHRH, 795
  - raphe nuclei, 351
  - stimulation, electrical, 351
  - stress, shock induced, 795
- Malathion, 1031
  - cholinesterase inhibition
  - heat injury
  - hyperthermic exhaustion
- Malnutrition, alcohol induced, 513
  - alcohol
  - prenatal exposure
- Maprotiline, 719
  - chronic administration
  - oxaprotiline
  - shock induced fighting
- Maternal behavior, rats, 609
  - open field
  - opioids
- Meal size, 235
  - drinking
  - eating
  - nalmefene
  - opioid antagonists
- Medial forebrain bundle, 149
  - abuse liability
  - intracranial stimulation
  - levonantradol
  - reward thresholds
- Median raphe nucleus, 27
  - adrenergic agents
  - biochemical effects
  - locomotor activity
  - microinjections
  - open field
  - serotonin metabolism
- Memory, 309
  - Alzheimer disease
  - choline acetyltransferase
  - lesions, kainic acid
  - lesions, ventrolateral globus pallidus
  - passive avoidance
- Memory mechanisms, 733
  - amnesia
  - aversion

- Mesencephalic central gray, 301
  - escape
  - microinjections
  - morphine
  - nociceptive stimuli
  - stimulation, electrical
- Metabolism, 571
  - drinking
  - energy balance
  - ethanol
  - stimulation, electrical
- Method
  - electron microscopy, 635
  - ethological analysis, 645
  - hot plate test, 251, 561
  - light microscopy, 635
  - power spectral analysis, 715
  - rapid brain histology, 1049
- Methylphenidate, 725
  - amphetamine
  - caffeine
  - drug interaction
  - play soliciting, juvenile rats
- MHPG-SO<sub>4</sub>
  - immobilization, 543
  - noradrenaline activity, 287
  - noradrenaline release, 543
  - restraint, 287
  - stress, 287
- Mice, 863
  - opioid receptor agonists
  - urinary output
- Microcomputer
  - analysis, 729
  - behavioral data acquisition, 729
  - computerized animal observation, 765
  - videodigitizer, 765
- Microinjections
  - adrenergic agents, 27
  - biochemical effects, 27
  - escape, 301
  - locomotor activity, 27
  - median raphe nucleus, 27
  - mesencephalic central gray, 301
  - morphine, 301
  - nociceptive stimuli, 301
  - open field, 27
  - serotonin metabolism, 27
  - stimulation, electrical, 301
- Minimum-interreinforcer interval, 843
  - drinking
  - lever press
  - self-administration, ethanol
- Monkeys, 701
  - acquisition, repeat
  - lever press
  - multiple schedule
- Monoamine oxidase, 263
  - drug interactions
  - motor activity
- Morphine
  - amphetamine, 57
  - apomorphine, 57
  - conditioned response, 327
  - drug interaction, 873
  - escape, 301
  - hamsters, 435
  - honeybees, 921
  - locomotor activity, 435
  - mesencephalic central gray, 301
  - microinjections, 301
  - naloxone, 921
  - nociception, 873
  - nociceptive stimuli, 301
  - opiate antagonists, 397
  - retention, 397
  - rotation sensing, 57
  - sensitization, 435
  - serotonin antagonists, 873
  - spatial memory, 397
  - stereotypy, 57
  - stimulation, electrical, 301
  - thermoregulation, 327
  - tolerance, 327, 435
- Morphine sulfate
  - feminization, 777
  - neuralestrogen receptors, 777
  - ovulation, immature rat, 269
  - pregnant mares serum gonadotrophin pretreatment, 269
  - prenatal exposure, female rats, 777
  - progesterone release, 269
- Morphine tolerance, 561
  - ACTH 4-10
  - arginine vasopressin
  - retention
- Motion sickness, 827
  - cats
  - emesis
  - naloxone
- Motor activity
  - conditioned taste aversion, 471
  - deuterium substitution, 471
  - drug interactions, 121, 263
  - DSP4, 121
  - eating, 121
  - locus coeruleus-noradrenaline system, 121
  - monoamine oxidase, 263
  - $\beta$ -phenylethylamine, 471
  - T maze, 121
- Mucosal erosions, 483
  - cingulate cortex
  - gastric pathology
  - stimulation, electrical
- Multiple schedule, 701
  - acquisition, repeat
  - lever press
  - monkeys
- Muricide
  - aggression, 663
  - avoidance, 1041
  - copper deficiency, 1041
  - drinking, 1041
  - irritability, 663
  - muscimol, 663
  - open field, 1041
- Muscarinic receptors, 103
  - body temperature
  - choline uptake
  - chronic administration
  - oxotremorine
  - rotarod performance
  - tolerance
- Muscimol
  - ADH release, 335
  - aggression, 663
  - apomorphine, 199
  - dopaminergic supersensitivity, 199
  - GABA receptor binding, 199
  - haloperidol, 199
  - hypertonic sodium chloride, 335
  - irritability, 663
  - muricide, 663
  - route of administration, 335
  - stereotypy, 199
- Muscle relaxation, 549
  - clonazepam
  - drug interaction
  - head twitches
- Muscle tone, 463
  - corpus striatum
  - nucleus accumbens
  - reserpine rigidity
- Muscular rigidity, 169
  - adipsia
  - akinesia
  - aphagia
  - biphasic effects
  - cataplexy, spiperone-induced
  - lesions, globus pallidus
  - ptosis
- Myoclonus, 193
  - chlorimipramine
  - chronic administration
  - exploratory behavior
  - locomotor activity
  - resting time
  - serotonin
- Nalmefene, 235
  - drinking
  - eating
  - meal size
  - opioid antagonists
- Naloxone
  - apomorphine, 49
  - avoidance, 423
  - cats, 827
  - dopaminergic activity, 49
  - drinking, 1045
  - eating, 1045
  - emesis, 827
  - escape latency, 423
  - ethanol, 1045
  - honeybees, 921
  - intertrial response, 423
  - lesions, 6-hydroxydopamine, 49
  - lesions, substantia nigra, 49
  - morphine, 921
  - motion sickness, 827
  - opioid receptors, 423
  - L-prolyl-L-leucyl-glycinamide, 49
  - stereotypy, 49
- Neonatal depletion, 743
  - avoidance
  - catecholamines
- Nervous system, 345
  - $\alpha_2$  adrenergic agonists
  - kindling
  - seizures, drug induced
- Neuralestrogen receptors, 777
  - feminization
  - morphine sulfate
  - prenatal exposure, female rats
- Neurobehavioral effects, 1051
  - opiates
  - prenatal administration
  - trinitated methadone
- Neuroendocrine, 431
  - auditory threshold
  - human studies
  - hydrocortisone
  - perception

- Neurohormones, 1037
  - cerebrospinal fluid
  - delta sleep-inducing peptide
  - neuropeptides
- Neuroleptics, 63
  - cholinergic drug interaction
  - dopamine receptors
  - genotypic variation
  - hippocampus
  - striatum
- Neuropeptides, 1037
  - cerebrospinal fluid
  - delta sleep-inducing peptide
  - neurohormones
- Neurotensin
  - aminopeptidases, 791
  - analgesia, 791
  - leucine, 791
  - thermoregulation, 477
- Nicotine
  - avoidance, 1021
  - baboons, 993
  - beagle dogs, 1011
  - behavioral consequences, 1027
  - drug interaction, 553
  - drug reinforcement, 993
  - electric shock, 1027
  - fixed interval schedule, 553
  - fixed ratio schedule, 1011
  - human studies, 989, 1021
  - pharmacology, 1027
  - plasma corticosterone, 559
  - reinforcement schedule, 989, 1021
  - schedule-induced behavior, 1005
  - self-administration, 989, 993, 1005, 1021
  - squirrel monkeys, 553, 1011
  - stimulus shock termination, 553
  - Syrian hamsters, 605
  - taste, 605
  - thyroid hormones, 559
  - tobacco, 605
- Nicotine dependence, 291
  - cigarette smoking
  - human studies
  - plasma cotinine
- Nisoxetine, 205
  - amphetamine
  - discrimination
  - fixed ratio schedule
- Nociception, 873
  - drug interaction
  - morphine
  - serotonin antagonists
- Nociceptive stimuli, 301
  - escape
  - mesencephalic central gray
  - microinjections
  - morphine
  - stimulation, electrical
- Nociceptive threshold, 79
  - analgesia
  - antinociception
  - caudal reticular formation
  - cyclic nucleotides
  - periaqueductal gray
- Nonpharmacological influence, 755
  - drug interaction
  - psychoactive drugs
- Noradrenaline activity, 287
  - MHPG-SO<sub>4</sub>
  - restraint
  - stress
- Noradrenaline release, 543
  - immobilization
  - MHPG-SO<sub>4</sub>
- Noradrenaline turnover, 393
  - activity, stress paradigm
  - gastric ulcers
  - wheel running
- Norepinephrine, 945
  - eating
  - lesions, hypothalamus
- Nucleus accumbens, 463
  - corpus striatum
  - muscle tone
  - reserpine rigidity
- Obesity
  - acarbose, 85
  - carbohydrate absorption, 85
  - eating, 85, 617
  - gonadal steroids, 617
  - strain differences, 85
  - white leghorn cocks, 617
- Obesity, dietary, 71
  - acarbose
  - body weight
  - diet composition
  - eating
- Open field
  - adrenergic agents, 27
  - avoidance, 1041
  - biochemical effects, 27
  - brain catecholamines, 407
  - conditioned emotional response, 407
  - copper deficiency, 1041
  - drinking, 1041
  - drug interaction, 693
  - lesions, central noradrenergic bundle, 407
  - locomotor activity, 27, 693
  - maternal behavior, rats, 609
  - median raphe nucleus, 27
  - microinjections, 27
  - muricide, 1041
  - opioids, 609
  - serotonin metabolism, 27
  - startle response, 407
- Operant behavior
  - chlordiazepoxide, 787
  - discrimination, 415
  - drug interaction, 415
  - response force, 787
  - whole brain extract, 241
- Operant learning, 1
  - apomorphine sensitivity
  - drug discrimination
- Opiate antagonists, 397
  - morphine
  - retention
  - spatial memory
- Opiate receptors, 737
  - N-allylnormetazocine
  - eating
  - SKF-10,047
- Opiates
  - adrenalectomy, 403
  - butorphanol, 577
  - butorphanol tartrate, 403
  - chickens, 163
  - conditioned fear, 379
  - drinking, 505
  - eating, 403, 577
  - ethylketocyclazocine, 403
  - heart rate conditioning, 379
  - hyperthermia, 163
  - isolation housing, 163
  - neurobehavioral effects, 1051
  - prenatal administration, 1051
  - rabbits, 379
  - schedule-induced polydipsia, 505
  - social isolation, 163
  - tritiated methadone, 1051
- Opioid agonists, 711
  - ethylketocyclazocine
  - ketocyclazocine
  - physical dependence
  - self-administration
- Opioid antagonists, 235
  - drinking
  - eating
  - meal size
  - nalmefene
- Opioid receptor agonists, 863
  - mice
  - urinary output
- Opioid receptors
  - alpha-adrenoceptors, 879
  - avoidance, 423
  - escape latency, 423
  - intertrial response, 423
  - naloxone, 423
  - writhing, 879
- Opioids, 609
  - maternal behavior, rats
  - open field
- Organ weight, 821
  - body weight
  - drinking
  - locomotor activity
- Ovarian function, 583
  - estrous cycle
  - ethanol
- Ovulation, immature rat, 269
  - morphine sulphate
  - pregnant mares serum gonadotrophin pretreatment
  - progesterone release
- Oxaprotiline, 719
  - chronic administration
  - maprotiline
  - shock induced fighting
- Oxtremorine, 103
  - body temperature
  - choline uptake
  - chronic administration
  - muscarinic receptors
  - rotarod performance
  - tolerance
- Oxytocin, 587
  - drug interaction
  - histamine
  - pentylentetrazol
  - vasopressin
- Passive avoidance
  - active avoidance, 655
  - Alzheimer disease, 309
  - choline acetyltransferase, 309
  - lesions, kainic acid, 309
  - lesions, ventrolateral globus pallidus, 309

- memory, 309
  - retention, 655
  - strain differences, 655
  - substance P, 655
- Penile erection, 917
  - genital grooming
  - hypomotility
  - locomotor activity
- Pentazocine, 911
  - analgesia
  - drug interaction
  - tripelennamine
- Peptide
  - ACTH, 251
  - ACTH 4-10, 561
  - arginine vasopressin, 561
  - bombesin, 577
  - caerulein, 969
  - calcitonin, 577, 1037
  - cholecystokinin, 577, 969
  - corticotropin releasing factor (CRF), 771
    - delta sleep-induced peptide, 1037
    - endorphin, 235
    - $\beta$ -endorphin, 791, 979
    - [des-tyrosine<sup>1</sup>]- $\gamma$ -endorphin, 671
    - gastric-releasing peptide, 577
    - glucagon, 577
    - kyotorphin, 921
    - leu-enkephalin, 791, 921
    - LHRH, 795
    - [D-Ala<sup>2</sup>]-met-enkephalinamide, 791
    - met-enkephalin, 921
    - methionine-enkephalinamide, 921
    - [D-Ala]<sup>2</sup>methionine enkephalinamide, 427
    - neurotensin, 477, 791, 1037
    - oxytocin, 587
    - L-prolyl-L-leucyl-glycinamide, 49
    - sauvagine, 771
    - somatostatin, 577, 925
    - substance P, 655
    - thyrotropin-releasing hormone, 577
    - vasoactive intestinal peptide, 1037
    - vasopressin, 587
- Pentylentetrazol, 587
  - drug interaction
  - histamine
  - oxytocin
  - vasopressin
- Perception, 431
  - auditory threshold
  - human studies
  - hydrocrotisone
  - neuroendocrine
- Periaqueductal gray, 79
  - analgesia
  - antinociception
  - caudal reticular formation
  - cyclic nucleotides
  - nociceptive threshold
- Perseveration, 487, 497
  - amphetamine
  - exploration
  - radial maze
- Pharmacodynamics, 257
  - hypothermia
  - lithium chloride
  - strain differences
  - toxicity
- Pharmacokinetics, 535
  - cyclic AMP
- dopamine receptors
  - drug interaction
  - lesions, nigro-striatal pathway
  - rotation behavior
- Pharmacology, 1027
  - behavioral consequences
  - electric shock
  - nicotine
- Phencyclidine, 365
  - blood pressure
  - heart rate
  - plasma prolactin
- $\beta$ -Phenylethylamine, 471
  - conditioned taste aversion
  - deuterium substitution
  - motor activity
- Physical dependence, 711
  - ethylketocyclazocine
  - ketocyclazocine
  - opioid agonists
  - self-administration
- Pinna reflex, 527
  - acoustic startle reflex
  - guinea pigs
  - harmaline
  - sensory motor reactivity
  - vertex potentials
- Pituitary-adrenal axis
  - activity, 251
  - adrenal cortex, 321
  - biogenic amines, 321
  - drug interactions, 321
  - foot shock, 251
  - stress, heat induced, 251
- Pituitary adrenocortical system, 599
  - avoidance
  - dexamethasone
  - lever press
  - sex differences
- Place conditioning, 441
  - aversion
  - ethanol
- Plasma corticosterone, 559
  - nicotine
  - thyroid hormone
- Plasma cotinine, 291
  - cigarette smoking
  - human studies
  - nicotine dependence
- Plasma prolactin, 365
  - blood pressure
  - heart rate
  - phencyclidine
- Play soliciting, juvenile rats, 725
  - amphetamine
  - caffeine
  - drug interaction
  - methylphenidate
- Polydipsia, schedule-induced, 53
  - auditory stimulus
  - drinking
  - ethanol dependence
  - withdrawal
- Post shock motor suppression, 457
  - avoidance
  - strain differences
  - stress
- Postsynaptic dopamine receptors, 219
  - d-amphetamine
  - apomorphine
  - central amygdaloid nucleus
  - tolerance
- Power spectral analysis, 715
  - diazepam
  - EMG activity
  - sleep-wake cycle
- Prefrontal cortex, 211
  - dopamine receptors
  - self-stimulation
  - spontaneous motor activity
- Pregnant mares serum gonadotrophin
  - pretreatment, 269
  - morphine sulphate
  - ovulation, immature rat
  - progesterone release
- Prenatal administration, 1051
  - neurobehavioral effects
  - opiates
  - tritiated methadone
- Prenatal exposure, 513
  - alcohol
    - malnutrition, alcohol induced
- Prenatal exposure, female rats, 777
  - feminization
  - morphine sulfate
  - neuralestrogen receptors
- Preweanling treatment, 187
  - amphetamine
  - familiar cues
  - hyperactivity
- Progesterone release, 269
  - morphine sulphate
  - ovulation, immature rat
  - pregnant mares serum gonadotrophin
    - pretreatment
- L-Prolyl-L-leucyl-glycinamide, 49
  - apomorphine
  - dopaminergic activity
  - lesions, 6-hydroxydopamine
  - lesions, substantia nigra
  - stereotypy
- Propranolol, 419
  - drug interaction
  - quipazine
  - shock-elicited fighting
- Prostaglandin synthesis, 131
  - alcohol hypnosis
  - central nervous system depression
  - genetic factors
  - selective breeding
  - sex differences
- Psychoactive drugs, 755
  - drug interaction
  - nonpharmacological influence
- Psychosis, 245
  - animal model
  - catalepsy
  - glycine
  - serine
- Ptosis, 169
  - adipsia
  - akinesia
  - aphagia
  - biphasic effects
  - catalepsy, spiperone-induced
  - lesions, globus pallidus
  - muscular rigidity
- Punishment, 225
  - anxiety
  - punishment
  - serotonin
- Purines, 23
  - adenosine

- appetite
- eating
- Quipazine, 419
  - drug interaction
  - propranolol
  - shock-elicited fighting
- Rabbits, 379
  - conditioned fear
  - heart rate conditioning
  - opiates
- Radial maze, 487, 497
  - amphetamine
  - exploration
  - perseveration
- Radiation exposure, 979
  - hyperactivity
  - immunoreactivity
  - locomotor activity
- Raphe nuclei, 351
  - lordosis
  - stimulation, electrical
- RDS-127, 781
  - locomotor activity
  - seminal emission
  - sexual behavior, male rats
- Receptor affinities, 867
  - dopamine
  - extinction
  - self-stimulation
- Reinforcement schedule
  - avoidance, 1021
  - human studies, 989, 1021
  - nicotine, 989, 1021
  - self-administration, 989, 1021
- Renin-angiotensin, 373
  - adrenalectomy
  - catecholamines
  - drinking
- Reserpine rigidity, 463
  - corpus striatum
  - muscle tone
  - nucleus accumbens
- Response force, 787
  - chlordiazepoxide
  - operant behavior
- Response-independent shock, 5
  - aggression
  - attack
  - biting
  - fixed ratio schedule
  - lever press
  - squirrel monkeys
- Resting time, 193
  - chlorimipramine
  - chronic administration
  - exploratory behavior
  - locomotor activity
  - myoclonus
  - serotonin
- Restraint, 287
  - MHPG-SO<sub>4</sub>
  - noradrenaline activity
  - stress
- Retention
  - ACTH 4-10, 561
  - active avoidance, 655
  - arginine vasopressin, 561
  - morphine, 397
  - morphine tolerance, 561
  - opiate antagonists, 397
  - passive avoidance, 655
  - spatial memory, 397
  - strain differences, 655
  - substance P, 655
- Reward thresholds, 149
  - abuse liability
  - intracranial stimulation
  - levonantradol
  - medial forebrain bundle
- Rhesus monkeys
  - cholinergic drugs, 963
  - cocaine, 145
  - delayed to-match-sample, 963
  - discriminative stimulus properties, 145
  - short-term memory, 963
- RO 5-3663, 39
  - anxiety
  - benzodiazepine antagonists
  - convulsants
  - GABA
  - RO 15-1788
- RO 15-1788
  - anxiety, 39
  - benzodiazepine antagonists, 39, 895
  - convulsants, 39
  - exploration, 895
  - GABA, 39
  - locomotor activity, 895
  - RO 5-3663, 39
- Rotarod performance, 103
  - body temperature
  - choline uptake
  - chronic administration
  - muscarinic receptors
  - oxotremorine
  - tolerance
- Rotation sensing device, 57
  - amphetamine
  - apomorphine
  - morphine
  - stereotypy
- Rotational behavior
  - cyclic AMP, 535
  - dopamine receptors, 535
  - drug interaction, 535, 813
  - lesions, nigro-striatal pathway, 535
  - pharmacokinetics, 535
  - superior colliculus, 813
  - wet dog shakes, 813
- Route of administration, 335
  - ADH release
  - hypertonic sodium chloride
  - muscimol
- Sauvagine, 771
  - conditioned taste aversion
  - CRF
  - eating
- Schedule-induced behavior, 1005
  - nicotine
  - self-administration
- Schedule-induced polydipsia, 505
  - drinking
  - opiates
- Schedule induced self injection, 985
  - buprenorphine
  - ethanol
- Seizure threshold, 339
  - caffeine
  - kindled amygdaloid seizures
- Seizures, 957
  - benzodiazepines
  - drug interaction
- Seizures, drug induced, 345
  - alpha<sub>2</sub> adrenergic agonists
  - kindling
  - nervous system
- Seizures, post decapitation, 427
  - dopamine metabolism
  - spinal cord
- Selective breeding
  - alcohol, 683
  - alcohol hypnosis, 131
  - central nervous system depression, 131
  - ethanol, 683
  - genetic factors, 131
  - jump test, 683
  - prostaglandin synthesis, 131
  - sex differences, 131
  - tolerance, 683
- Self-administration
  - avoidance, 1021
  - baboons, 993
  - body weight, 453
  - cocaine, 453
  - drug reinforcement, 993
  - ethylketocyclazocine, 711
  - food deprivation, 453
  - human studies, 989, 1021
  - ketocyclazocine, 711
  - nicotine, 989, 993, 1005, 1021
  - opioid agonists, 711
  - physical dependence, 711
  - reinforcement schedule, 989, 1021
  - schedule-induced behavior, 1005
- Self-administration, ethanol, 843
  - drinking
  - lever press
  - minimum-interreinforcer interval
- Self-stimulation
  - barbiturates, 625
  - dopamine, 867
  - dopamine receptors, 211
  - extinction, 867
  - GABA, 625
  - locomotor activity, 625
  - prefrontal cortex, 211
  - receptor affinities, 867
  - spontaneous motor activity, 211
- Seminal emission, 781
  - locomotor activity
  - RDS-127
  - sexual behavior, male rats
- Sensitization, 435
  - hamsters
  - locomotor activity
  - morphine
  - tolerance
- Sensory motor reactivity, 527
  - acoustic startle reflex
  - guinea pigs
  - harmaline
  - pinna reflex
  - vertex potentials
- Serine, 245
  - animal model
  - catalepsy
  - glycine
  - psychosis
- Serotonin
  - anxiety, 225



- chlorimipramine, 193
- chronic administration, 193
- exploratory behavior, 193
- locomotor activity, 193
- myoclonus, 193
- punishment, 225
- resting time, 193
- substantia nigra, 225
- Serotonin antagonists, 873
  - drug interaction
  - morphine
  - nociception
- Serotonin metabolism, 27
  - adrenergic agents
  - biochemical effects
  - locomotor activity
  - median raphe nucleus
  - microinjections
  - open field
- Sex differences
  - alcohol hypnosis, 131
  - avoidance, 599
  - central nervous system depression, 131
  - dexamethasone, 599
  - genetic factors, 131
  - level press, 599
  - pituitary adrenocortical system, 599
  - prostaglandin synthesis, 131
  - selective breeding, 131
- Sexual behavior, male rats, 781
  - locomotor activity
  - RDS-127
  - seminal emission
- Shock-induced fighting
  - $\beta$ -adrenergic receptors, 313
  - aggressive behaviors, 313
  - chronic administration, 719
  - drug interaction, 419
  - maprotiline, 719
  - oxaprotiline, 719
  - propranolol, 419
  - quipazine, 419
- Short-term memory, 963
  - cholinergic drugs
  - delayed match-to-sample
  - rhesus monkeys
- SKF-10,047, 737
  - N-allylnormetazocine
  - eating
  - opiate receptors
- Sleep-wake cycle, 715
  - diazepam
  - EMG activity
  - power spectral analysis
- Social interactions, 645
  - agonistic behavior
  - ethanol
  - ethological analysis
  - strain differences
- Social isolation
  - analgesia, 679
  - chickens, 163
  - group housing, 679
  - hyperthermia, 163
  - isolated housing, 679
  - isolation, 163
  - opiates, 163
- Somatostatin, 925
  - gastric ulcer
  - histamine
  - stimulation, vagal
- Spatial memory, 397
- morphine
  - opiate antagonists
  - retention
- Spinal cord, 427
  - dopamine metabolism
  - seizures, post decapitation
- Spontaneous motor activity
  - amphetamine, 157
  - conditioned avoidance, 157
  - dopamine receptors, 211
  - dopaminergic mechanisms, 157
  - LHRH, 157
  - prefrontal cortex, 211
  - self-stimulation, 211
- Squirrel monkeys
  - aggression, 5
  - attack, 5
  - beagle dogs, 1011
  - biting, 5
  - drug interaction, 553
  - fixed interval schedule, 553
  - fixed ratio schedule, 5, 1011
  - lever-press, 5
  - nicotine, 553, 1011
  - response-independent shock, 5
  - stimulus, shock termination, 553
- Staining, 1049
  - histological sectioning
- Startle response, 407
  - brain catecholamines
  - conditioned emotional response
  - lesions, central noradrenergic bundle
  - open field
- Stereotypy
  - $\alpha$ -adrenolytics, 19
  - affective behavior, 33
  - amphetamine, 33, 57
  - animal model, affective psychosis, 33
  - apomorphine, 19, 49, 57, 153, 199
  - defensive flight, 33
  - dopamine, 19
  - dopamine receptor system, 153
  - dopaminergic activity, 49
  - dopaminergic supersensitivity, 199
  - drug interactions, 19
  - GABA receptor binding, 199
  - haloperidol, 199
  - lesions, 6-hydroxydopamine, 49
  - lesions, substantia nigra, 49
  - locomotor activity, 153
  - morphine, 57
  - muscimol, 199
  - naloxone, 49
  - L-prolyl-L-leucyl-glycinamide, 49
  - rotation sensing device, 57
  - strain differences, 153
  - striatum, 19
- Stimulation, electrical
  - cingulate cortex, 483
  - drinking, 571
  - energy balance, 571
  - escape, 301
  - ethanol, 571
  - gastric pathology, 483
  - lordosis, 351
  - mesencephalic central gray, 301
  - metabolism, 571
  - microinjections, 301
  - morphine, 301
  - mucosal erosions, 483
  - nociceptive stimuli, 301
  - raphe nuclei, 351
- Stimulation, tactile, 281
  - GABA agonist
  - superior colliculus
- Stimulation, vagal, 925
  - gastric ulcer
  - histamine
  - somatostatin
- Stimulus shock termination, 553
  - drug interaction
  - fixed-interval
  - nicotine
  - squirrel monkeys
- Strain differences
  - acarbose, 85
  - active avoidance, 655
  - agonistic behavior, 645
  - apomorphine, 153
  - avoidance, 457
  - benzodiazepine, 951
  - carbohydrate absorption, 85
  - 3-carbomethoxy- $\beta$ -carboline, 951
  - dopamine receptor system, 153
  - eating, 85
  - ethanol, 645
  - ethological analysis, 645
  - hypothermia, 257
  - lithium chloride, 257
  - locomotor activity, 153
  - obesity, 85
  - passive avoidance, 655
  - pharmacodynamics, 257
  - post shock motor suppression, 457
  - retention, 655
  - social interactions, 645
  - stereotypy, 153
  - stress, 457
  - substance P, 655
  - toxicity, 257
- Stress
  - aggression, 883
  - avoidance, 457
  - immunoglobulin E (IgE), 883
  - MHPG-SO<sub>4</sub>, 287
  - noradrenaline activity, 287
  - post shock motor suppression, 457
  - restraint, 287
  - strain differences, 457
- Stress, heat induced, 251
  - activity
  - foot shock
  - pituitary-adrenal axis
- Stress, shock induced, 795
  - endogenous opioids
  - LHRH
  - lordosis
- Stress ulcers, drug induced, 359
  - adrenergic blockers
  - aggressive behavior
  - anticholinergic drugs
  - gastric secretion
- Striatal dopaminergic system, 13
  - automated rotation measurement
  - circling behavior
  - lesions, 6-hydroxydopamine
  - lesions, striatum
- Striatum
  - $\alpha$ -adrenolytics, 19
  - apomorphine, 19
  - cholinergic drug interaction, 63
  - circling behavior, 231
  - dopamine, 19, 231
  - dopamine receptors, 63

- drug interactions, 19, 231
- genotypic variation, 63
- hippocampus, 63
- neuroleptics, 63
- stereotypy, 19
- Substance P, 655
  - active avoidance
  - passive avoidance
  - retention
  - strain differences
- Substantia nigra, 225
  - anxiety
  - punishment
  - serotonin
- Superior colliculus
  - drug interaction, 813
  - GABA agonist, 281
  - rotational behavior, 813
  - stimulation, tactile, 281
  - wet dog shakes, 813
- Syrian hamsters, 605
  - nicotine
  - taste
  - tobacco
  
- Tail flick, 447
  - analgesia
  - clonidine
  - cold water swim
  - hypothermia
  - lesions, locus coeruleus
- Taste, 605
  - nicotine
  - Syrian hamsters
  - tobacco
- Thermoregulation
  - blackbirds, 857
  - conditioned response, 327
  - discrimination, 857
  - drinking, 857
  - morphine, 327
  - neurotensin, 477
  - tolerance, 327
- Thyroid hormone, 559
  - nicotine
  - plasma corticosterone
  
- T maze, 121
  - drug interaction
  - DSP4
  - eating
  - locus coeruleus-noradrenaline system
  - motor activity
- Tobacco, 605
  - nicotine
  - Syrian hamsters
  - taste
- Tolerance
  - alcohol, 683
  - d-amphetamine, 219
  - apomorphine, 219
  - body temperature, 103
  - central amygdaloid nucleus, 219
  - choline uptake, 103
  - chronic administration, 103
  - conditioned response, 327
  - ethanol, 683
  - hamsters, 435
  - jump test, 683
  - locomotor activity, 435
  - morphine, 327, 435
  - muscarinic receptors, 103
  - oxotremorine, 103
  - postsynaptic dopamine receptors, 219
  - rotarod performance, 103
  - selective breeding, 683
  - sensitization, 435
  - thermoregulation, 327
- Toluene exposure, 899
  - anxiolytic action
  - conflict behavior
  - diazepam
  - drug interactions
- Toluene preference, 933
  - ethanol preference
- Toxicity, 257
  - hypothermia
  - lithium chloride
  - pharmacodynamics
  - strain differences
- Tricyclic anti-depressants, 751
  - drug discrimination
- Tripelethamine, 911
  - analgesia
  - drug interaction
  
- penzocine
- Tritiated methadone, 1051
  - neurobehavioral effects
  - opiates
  - prenatal administration
  
- Urinary output, 863
  - mice
  - opioid receptor agonists
  
- Vasopressin, 587
  - drug interaction
  - histamine
  - oxytocin
  - pentyleneetetrazol
- Vertex potentials, 527
  - acoustic startle reflex
  - guinea pigs
  - harmaline
  - pinna reflex
  - sensory motor reactivity
- Videodigitizer, 765
  - computerized animal observation
  - microcomputer
  
- Wet dog shakes, 813
  - drug interaction
  - rotational behavior
  - superior colliculus
- Wheel running, 393
  - activity, stress paradigm
  - gastric ulcers
  - noradrenaline turnover
- White leghorn cocks, 617
  - eating
  - gonadal steroids
  - obesity
- Whole brain extract, 241
  - operant behavior
- Withdrawal, 53
  - auditory stimulus
  - drinking
  - ethanol dependence
  - polydipsia, schedule-induced
- Writhing, 879
  - alpha-adrenoceptors
  - opioid receptors

## AUTHOR INDEX

- Ago, Y., 883  
 Ahlenius, S., 693  
 Albertson, T. E., 339, 345  
 Algeri, S., 427  
 Alling, C., 115  
 Alloway, K. D., 759  
 Altmann, H., 369  
 Amit, Z., 251  
 Anderson, G. M., 743  
 Ånggård, E., 115  
 Anisman, H., 487, 497  
 Antes, J. R., 431  
 Archer, T., 121  
 Arendash, G. W., 351  
 Artman, L. D., 103  
 Atkinson, J., 373  
 Atlas, D., 879  
 Ator, N. A., 993  
 Atrens, D. M., 571
- Badalamenti, J. I., 1049  
 Baile, C. A., 235  
 Balderrama, N., 921  
 Balster, R. L., 97  
 Banks, W. A., 1037  
 Barchas, J. D., 379  
 Barfield, R. J., 777  
 Barney, C. C., 519  
 Barrett, J. E., 553, 1027  
 Barrett, R. J., 457  
 Bartley, H. L., 513  
 Bashore, T. R., 759  
 Bassett, J. R., 559  
 Bayorh, M. A., 365  
 Beardesley, P. M., 843  
 Beaton, J. M., 241  
 Beatty, W. W., 397  
 Becker, W., 115  
 Beckwith, B. E., 431  
 Berge, O.-G., 873  
 Berman, R. F., 733  
 Bernet, F., 407  
 Berry, M. S., 645  
 Bidziński, A., 27, 177  
 Billington, C. J., 577  
 Bo, W. J., 583  
 Bodnar, R. J., 447  
 Bodnarenko, S. R., 1051  
 Boer, G. J., 599  
 Boissard, C. G., 719  
 Boulton, A. A., 471  
 Bourn, W. M., 839  
 Brann, M. R., 57  
 Bravo, F., 435  
 Bray, G. A., 71  
 Bridges, R. S., 609  
 Broitman, S. T., 193  
 Bruinvels, J., 245  
 Bruto, V., 487, 497  
 Burke, T. R., Jr., 365  
 Buterbaugh, G. G., 973
- Calabrese, L. C., 813  
 Cam, G. R., 559  
 Carlson, G. M., 263  
 Carney, J. M., 549  
 Celasco, G., 917  
 Chan, A. W. K., 275  
 Chang, K., 945
- Chase, T. N., 655  
 Chen, S. M., 925  
 Chen, S. W., 925  
 Cho, C. H., 925  
 Clark, J. T., 781  
 Cleary, J., 911  
 Cohen, D. J., 743  
 Coleman, G. J., 269, 795  
 Collins, A. C., 103, 131  
 Collu, M., 917  
 Commissaris, R. L., 891  
 Cooper, D. O., 457  
 Cooper, S. J., 505  
 Covelli, V., 567  
 Coyle, I. R., 513  
 Crampton, G. H., 827  
 Czekajewski, J., 13
- Danek, L., 19  
 Danysz, W., 27  
 Daunton, N. G., 827  
 Davidson, J. M., 781  
 Davis, A. J., 867  
 Davis, K. R., 791  
 Davis, M., 891  
 Deere, W., 979  
 de Caro, G., 335  
 de Kloet, E. R., 587  
 Delini-Stula, A., 719  
 DePaulis, A., 729  
 De Simoni, M. G., 427  
 Di Scala, G., 281  
 Díaz-Véliz, G., 157  
 Dose, M., 369  
 Dourish, C. T., 471  
 Dudek, B. C., 327  
 Durkin, T. P., 63  
 Dyr, W., 177
- Ebel, A., 63  
 Ehrlich, Y. H., 57  
 Eichelman, B., 313  
 El-Kassem, M., 257  
 Ellinwood, E. H., Jr., 969  
 Ellis, J., 57  
 Ellis, M. E., 733  
 Elmer, G. I., 131  
 Emley, G. S., 5  
 Emrich, H. M., 369  
 Etgen, A. M., 777
- Falk, J. L., 53, 385  
 Fasmer, O. B., 873  
 Feldman, R. S., 423  
 Feldon, J., 39  
 Ferrer, J. M. R., 211  
 Fertig, J. B., 291  
 Fijiwara, M., 883  
 Finnerty, M., 57  
 Fóscolo, M. R., 193  
 Fowler, S. C., 787  
 Francesconi, R., 1031  
 Fredholm, B. B., 535  
 Fregly, M. J., 519  
 Friedman, E., 309  
 Frischknecht, H.-R., 939  
 Frohm, K. D., 163  
 Fujiwara, M., 359  
 Fung, Y. K., 13, 231
- Galina, Z. H., 251  
 Gallistel, C. R., 867  
 Gallus, J. A., 821  
 Garrett, R. L., 839  
 Garza, R. de la, 145  
 Gause, E. M., 899, 933  
 Geller, I., 899, 933  
 Gelman, J., 759  
 George, F. R., 131  
 Gessa, G. L., 917  
 Gianutsos, G., 263  
 Gibbs, G. L., 979  
 Gispen, W. H., 765  
 Glavin, G. B., 287  
 Glick, S. D., 1049  
 Glick, Z., 71  
 Glusman, M., 663  
 Godfrey, J. G., 263  
 Goldberg, S. R., 989, 1011, 1021  
 Goldstein, B. D., 79  
 Gordon, J. H., 807  
 Gorski, R. A., 351  
 Gosnell, B. A., 737, 771  
 Gourdon, M.-J., 527  
 Grace, M., 577  
 Gramling, S. E., 787  
 Greenland, R. D., 635  
 Greenleaf, J. E., 519  
 Greenshaw, A. J., 471  
 Greenwood, M. R. C., 85  
 Greer, N. L., 415  
 Griffiths, R. R., 993  
 Grimm, C. T., 609  
 Grossett, D., 911  
 Grunberg, N. E., 553
- Hacker, M., 57  
 Hammer, N. J., 945  
 Hamon, M., 225  
 Haraczkiwicz, E., 85  
 Hartl, T. J., 49  
 Hartmann, R. J., 899, 933  
 Hashem-Zedeh, H., 63  
 Hauptmann, M., 27  
 Hegstrand, L. R., 313  
 Heinsbroek, R. P. W., 599  
 Helmeste, D. M., 153  
 Hendry, J. S., 97  
 Henke, P. G., 483  
 Henningfield, J. E., 887, 989, 1011, 1021  
 Hepler, J. R., 477  
 Herberg, L. J., 625  
 Hernandez, D. E., 791  
 Herrera-Marschitz, M., 535  
 Hill, D. L., 423  
 Ho, L. T., 925  
 Hoaki, Y., 287, 393  
 Hole, K., 873  
 Holloway, W. R., Jr., 725  
 Holtzman, S. G., 505  
 Howerton, T. C., 131  
 Hubbard, R., 1031  
 Huffman, R. D., 199  
 Hulse, G. K., 269, 795  
 Hutchings, D. E., 1051  
 Hutchinson, R. R., 5  
 Hynes, M. D., 879
- Ida, Y., 393, 543  
 Iimori, K., 393  
 Iovino, M., 335  
 Ito, Y., 883
- Jackson, C., 33  
 Jasinski, D. R., 887  
 Jenck, F., 301  
 Johanson, C. E., 145  
 Johnels, B., 463  
 Johnson, N. J., 801  
 Jones, A. W., 115  
 Jonzon, B., 535  
 Jork, R., 43  
 Joy, R. M., 339, 345
- Kalant, H., 441  
 Kameyama, T., 671  
 Karli, P., 281, 301  
 Kastin, A. J., 1037  
 Kattau, R. W., 863  
 Kelly, P. H., 137  
 Kempf, J., 63  
 Kesner, R. P., 733  
 Khazan, N., 711, 715  
 Kikta, D. C., 519  
 Kneip, J., 577  
 Kober, K. J., 13  
 Kohno, Y., 287, 393, 543  
 Kokkinidis, L., 497, 593  
 Kopin, I. J., 365  
 Kornetsky, C., 149  
 Kostowski, W., 27, 177  
 Krueger, W. A., 583  
 Ksir, C., 605  
 Kucharski, L. T., 149  
 Kuster, J., 309
- Laczi, F., 587  
 Lasley, S. M., 635  
 Lavond, D. G., 379  
 Leander, J. D., 863  
 Lee, E. H., 219  
 Lee, T. F., 477  
 Leibowitz, S. F., 945  
 Le Magnen, J., 571, 1045  
 Lemaire, G. A., 843  
 Lenox, R. H., 57  
 Leong, F. W., 275  
 Lerer, B., 309  
 Lerner, T., 39  
 Lerud, K., 431  
 Levin, D., 39  
 Levine, A. S., 23, 403, 577, 737, 771  
 Levitt, M., 1051  
 Lin, K.-N., 1041  
 Levy, R. A., 79  
 Lewis, R. M., 787  
 Li, T.-K., 683, 849  
 Linakis, J., 743  
 Lindström, K., 535  
 Lipsitz, D. U., 655  
 Lodder, H. M., 755  
 Loddo, S., 917  
 Lössner, B., 43  
 Lozovsky, D., 365  
 Lucas, T. S., 49  
 Lucchi, L., 567

- Lumeng, L., 683, 849
- McBride, W. J., 683, 849
- McDonough, J. H., Jr., 963
- McElroy, J., 423
- McLaughlin, C. L., 235
- Madden, J., IV, 379
- Mager, M., 1031
- Maggio, C. A., 85
- Maickel, R. P., 321
- Maldonado, H., 921
- Mandel, P., 63
- Mandybur, T., 635
- Marfaing-Jallat, P., 571, 1045
- Marks, M. J., 103
- Martel, R. R., 321
- Martin, A., 985
- Maruniak, J. A., 857
- Massi, M., 335
- Mason, J. R., 857
- Masur, J., 755
- Matthies, H., 43
- Mauk, M. D., 379
- Medeiros, D. M., 1041
- Meisch, R. A., 843
- Mendez, V., 899
- Mens, W. B. J., 587
- Merrigan, K. P., 447
- Mickley, G. A., 979
- Miller, L. H., 423
- Mine, K., 359, 883
- Miralto, A., 921
- Miyasato, K., 887
- Moerschbaecher, J. M., 701
- Mogilnicka, E., 719
- Mohammed, A. K., 121
- Mollnauer, A., 33
- Moore, G. H., 979
- Moore, J. E., 561
- Moore, K. E., 905
- Mora, F., 211
- Mora, S., 157
- Morley, J. E., 23, 403, 577, 737, 771
- Morris, P. E., 241
- Morse, D. E., 553
- Mucha, R. E., 441
- Mueller, G. P., 979
- Murphy, J. M., 849
- Myers, R. D., 477
- Myslobodsky, M., 39
- Nagasaki, N., 287, 393, 543
- Nail, G. L., 787
- Nakagawa, R., 393, 543
- Nakagawa, T., 359, 883
- Nakamura, M., 549
- Nanry, K. P., 821
- Nicklaus, K. J., 813
- Nielsen, J. A., 905
- Nishikawa, T., 393
- Nobrega, J. N., 831
- Noda, T., 359
- Noda, Y., 543
- Núñez, J., 921
- Oei, T. P. S., 453, 985
- Oliverio, A., 679
- O'Shaughnessy, M., 441
- Ossowska, K., 169
- Pappas, B. A., 957
- Paul, S. M., 951
- Peck, P. L., 655
- Pellet, J., 527
- Pelleymounter, M. A., 655
- Penetar, D. M., 963
- Pepplinkhuizen, L., 245
- Petkov, V. V., 567
- Picker, M., 911
- Pilotto, R., 985
- Płaznik, A., 27, 427
- Poenaru, S., 335
- Poling, A., 821, 911
- Pollack, T., 33
- Pomerleau, O. F., 291
- Popov, N., 43
- Potegal, M., 663
- Potter, E. A., 13
- Prasad, V., 419
- Proudfit, H. K., 79
- Puglisi-Allegra, S., 679
- Quock, R. M., 49
- Rabii, J., 777
- Rafales, L. S., 635
- Raskin, L. A., 187, 743
- Rathbun, R. C., 863
- Rebec, G. V., 219, 759
- Reichenberg, K., 19
- Reynolds, B. W., 431
- Rice, K. C., 365
- Riggio, G., 939
- Risner, M. E., 1011
- Roberts, D. C. S., 137
- Robinson, B., 617, 929
- Rockwell, W. J. K., 969
- Rodgers, R. J., 895
- Rodríguez Echandía, E. L., 193
- Rosecrans, J. A., 97
- Rosellini, R. A., 327
- Rosenfield, S., 895
- Ross, S. B., 121
- Rowland, N. E., 519
- Rudeen, P. K., 583
- Ruffolo, R. R., Jr., 879
- Sanguinetti, A. M., 211
- Schanley, D. L., 275
- Schechter, M. D., 1, 415, 751
- Schlesinger, K., 655
- Schmidt, D. E., 457
- Schmidt, S., 43
- Schmitt, P., 281, 301
- Schnur, P., 435
- Schouten, M. J., 245
- Schulzeck, S., 43
- Schwarz, R. D., 231
- Schweri, M. M., 951
- Serra, G., 917
- Sewell, R. G., Jr., 821
- Shalita, B., 617
- Shanahan, S. O., 291
- Shapiro, N. R., 327
- Shapiro, R. M., 1049
- Shaywitz, B. A., 743
- Sheard, M. H., 419
- Siegfried, B., 939
- Silva-Filho, A. R., 755
- Sinden, J. D., 1045
- Singer, G., 513, 985
- Singh, S. M., 257
- Skolnick, P., 951
- Slifer, B. L., 1005
- Smiałowska, M., 169
- Smith, E. R., 781
- Smoothy, R., 645
- Snafir, N., 617, 929
- Snoddy, A. M., 205
- Söderberg, U., 121
- Soubrie, P., 225
- Spano, P.-F., 567
- Spealman, R. D., 1011
- Sperber, E., 447
- Spruiji, B. M., 765
- Stark, L. G., 339, 345
- Steardo, L., 335
- Stefanick, M. L., 781
- Stevens, K. E., 979
- Stevens, R., 801
- Stewart, J. M., 655
- Sutherland, C. J., 251
- Svensson, L., 693
- Takeda, S., 543
- Tanaka, M., 287, 393, 543
- Tang, M., 53
- Teicher, M. H., 743
- Tessel, R. E., 205
- Thiébot, M.-H., 225
- Thompson, D. M., 701
- Thompson, R. F., 379
- Thor, D. H., 725
- Thorne, B. M., 1041
- Threatte, R. M., 519
- Ticku, M. K., 199
- Tonnaer, J. A. D. M., 587
- Torello, M. W., 13
- Trabucchi, M., 567
- Trujillo, M., 435
- Tsuda, A., 287, 393
- Tsuruta, N., 359
- Turnbull, B. A., 423
- Ueki, S., 359, 883
- Ukai, M., 671
- Ungerstedt, U., 535
- van de Poll, N. E., 599
- van der Kooy, D., 441
- Vanecek, S. A., 821
- van Oyen, H. G., 599
- van Wimersma Greidanus, T. J. B., 587
- Vasselli, J. R., 85
- Vathy, I. U., 777
- Verleye, M., 407
- Vetulani, J., 19
- Vives, F., 211
- von Zerssen, D., 369
- Wagoner, N., 969
- Waldmeier, P. C., 719
- Wallace, S., 911
- Waller, M. B., 683
- Waller, S. B., 973
- Wallnau, L. B., 163
- Walsh, P., 957
- Waser, P. G., 939
- Waters, A. J., 895
- Weaver, M. L., 1041
- Weiss, M., 527
- Weldon, D. A., 813
- White, G. A., 979
- Wiener, N. I., 831
- Williams, J. E. G., 149
- Williams, S. F., 625
- Wilson, J. H. P., 245
- Winsauer, P. J., 701
- Wiszniewska-Szafranec, G., 19
- Wolfarth, S., 169
- Wolfenden, R., 791
- Wu, B. N., 1041
- Yoburn, B., 663
- York, J. L., 687
- Young, G. A., 711, 715
- Zacharski, B., 177