

## References

- A.P.A. (1994). *Diagnostic and statistical manual of mental disorders*. (4 ed.). Washington D.C.: American Psychiatric Association.
- Abood, M. E., & Martin, B. R. (1992). Neurobiology of marijuana abuse. *Trends in Pharmacological Sciences*, 13(5), 201-206.
- Aceto, M. D., Scates, S. M., Lowe, J. A., & Martin, B. R. (1995). Cannabinoid precipitated withdrawal by the selective cannabinoid receptor antagonist SR141716A. *European Journal of Pharmacology*, 282, R1-R2.
- Aceto, M. D., Scates, S. M., Lowe, J. A., & Martin, B. R. (1996). Dependence on  $\Delta^9$ -tetrahydrocannabinol: studies on precipitated and abrupt withdrawal. *Journal of Pharmacology & Experimental Therapeutics*, 278(3), 1290-1295.
- Adams, I. B., & Martin, B. R. (1996). Cannabis: pharmacology and toxicology in animals and humans. *Addiction*, 91(11), 1585-1614.
- AIHW. (1998). *National Drug Strategy Household Survey 1998: first results*.: Australian Institute of Health and Welfare.
- Alheid, G. F., de Olmos, J. S., & Beltramino, C. A. (1995). Amygdala and Extended Amygdala. In G. Paxinos (Ed.), *The Rat Nervous System* (2nd ed., pp. 495-478). San Diego: Academic Press.
- Alonso, R., Voutsinos, B., Fournier, M., Labie, C., Steinberg, R., Souilhac, J., Le Fur, G., & Soubrie, P. (1999). Blockade of cannabinoid receptors by SR141716 selectively increases Fos expression in rat mesocorticolimbic areas via reduced dopamine D<sub>2</sub> function. *Neuroscience*, 91(2), 607-620.
- Ameri, A. (1999). The effects of cannabinoids on the brain. *Progress in Neurobiology*, 58, 315-348.
- Amir, S. (1990). Stimulation of the paraventricular nucleus with glutamate activates interscapular brown adipose tissue thermogenesis in rats. *Brain Research*, 508(1), 152-155.
- Annas, G. J. (1997). Reefer madness - the federal response to California's medical-marijuana law. *The New England Journal of Medicine*, 337(6), 435-439.
- Annis, H. M., & Smart, R. G. (1973). Adverse reactions and recurrences from marihuana use. *British Journal of Addiction to Alcohol & Other Drugs*, 68(4), 315-319.
- Anthony, J. C., Warner, L. A., & Kessler, R. C. (1994). Comparative epidemiology of dependence on tobacco, alcohol, controlled substances and inhalants: Basic findings from the National Comorbidity Survey. *Experimental and Clinical Psychopharmacology*, 2, 244-268.
- Antoni, F. A., Palkovits, M., Makara, G. B., Linton, E. A., Lowry, P. J., & Kiss, J. Z. (1983). Immunoreactive corticotropin-releasing hormone in the hypothalamoinfundibular tract. *Neuroendocrinology*, 36(6), 415-423.

- Arborelius, L., Owens, M. J., Plotsky, P. M., & Nemeroff, C. B. (1999). The role of corticotropin-releasing factor in depression and anxiety disorders. *Journal of Endocrinology*, *160*(1), 1-12.
- Arnold, F. J., De Lucas Bueno, M., Shiers, H., Hancock, D. C., Evan, G. I., & Herbert, J. (1992). Expression of *c-fos* in regions of the basal limbic forebrain following intracerebroventricular corticotropin-releasing factor in unstressed or stressed male rats. *Neuroscience*, *51*(2), 377-390.
- Arnold, J. C., Topple, A. N., Hunt, G. E., & McGregor, I. S. (1998). Effects of pre-exposure and co-administration of the cannabinoid receptor agonist CP 55,940 on behavioral sensitization to cocaine. *European Journal of Pharmacology*, *354*(1), 9-16.
- Arnone, M., Maruani, J., Chaperon, F., Thiebot, M. H., Poncelet, M., Soubrie, P., & Le Fur, G. (1997). Selective inhibition of sucrose and ethanol intake by SR 141716, an antagonist of central cannabinoid (CB<sub>1</sub>) receptors. *Psychopharmacology*, *132*(1), 104-106.
- Artamonov, M. I. (1965). Frozen Tombs of the Scythians. *Scientific American*, *212*(5), 108.
- Ashton, C. H. (1999). Biomedical benefits of cannabinoids? *Addiction Biology*, *4*(2), 111-126.
- Astic, L., & Cattarelli, M. (1982). Metabolic mapping of functional activity in the rat olfactory system after a bilateral transection of the lateral olfactory tract. *Brain Research*, *245*(1), 17-25.
- Bac, P., Pages, N., Herrenknecht, C., & Paris, M. (1998). Measurement of the three phases of muricidal behavior induced by <sup>9</sup>-tetrahydrocannabinol in isolated, fasting rats. *Physiology & Behavior*, *63*(5), 815-820.
- Bailey, P. T., & Pradhan, S. N. (1972). Effects of <sup>9</sup>-tetrahydrocannabinol and mescaline on self-stimulation. *Neuropharmacology*, *11*(6), 831-838.
- Baker, D., Pryce, G., Croxford, J. L., Brown, P., Pertwee, R. G., Huffman, J. W., & Layward, L. (2000). Cannabinoids control spasticity and tremor in a multiple sclerosis model. *Nature*, *404*(6773), 84-87.
- Baldo, B. A., Koob, G. F., & Markou, A. (1999). Role of adenosine A<sub>2</sub> receptors in brain stimulation reward under baseline conditions and during cocaine withdrawal in rats. *Journal of Neuroscience*, *19*(24), 11017-11026.
- Bardo, M. T. (1998). Neuropharmacological mechanisms of drug reward: beyond dopamine in the nucleus accumbens. *Critical Reviews in Neurobiology*, *12*(1&2), 37-67.
- Barik, S., & de Beaufort, R. (1998). Hypothermic effects of dopamine D<sub>3</sub> receptor agonists in the island of Calleja Magna. Potentiation by D<sub>1</sub> activation. *Pharmacology, Biochemistry & Behavior*, *60*(2), 313-319.
- Basta, D., Tzschenke, B., & Nichelmann, M. (1997). Temperature guardian neurons in the preoptic area of the hypothalamus. *Brain Research*, *767*(2), 361-362.

- Bauco, P., & Wise, R. A. (1997). Synergistic effects of cocaine with lateral hypothalamic brain stimulation reward: lack of tolerance or sensitization. *Journal of Pharmacology & Experimental Therapeutics*, 283(3), 1160-1167.
- Behbehani, M. M. (1995). Functional characteristics of the midbrain periaqueductal gray. *Progress in Neurobiology*, 46(6), 575-605.
- Beitner-Johnson, D., Guitart, X., & Nestler, E. J. (1991). Dopaminergic brain reward regions of Lewis and Fischer rats display different levels of tyrosine hydroxylase and other morphine- and cocaine-regulated phosphoproteins. *Brain Research*, 561(1), 147-150.
- Beltramo, M., Stella, N., Calignano, A., Lin, S. Y., Makriyannis, A., & Piomelli, D. (1997). Functional role of high-affinity anandamide transport, as revealed by selective inhibition. *Science*, 277(5329), 1094-1097.
- Benowitz, N. L. (1992). How toxic is cocaine? *Ciba Foundation Symposium*, 166, 125-143; discussion 143-128.
- Bensusan, A. D. (1971). Marijuana withdrawal symptoms. *British Medical Journal*, 3(766), 112.
- Berlyne, D. E. (1969). The reward value of light increment under supranormal and subnormal arousal. *Canadian Journal of Psychology*, 23, 11-23.
- Berlyne, D. E., & Koenig, I. D. (1965). Some possible parameters of photic reinforcement. *Journal of Comparative & Physiological Psychology*, 60, 276-280.
- Berlyne, D. E., Koenig, I. D., & Hirota, T. (1966). Novelty, arousal, and the reinforcement of diversive exploration in the rat. *Journal of Comparative & Physiological Psychology*, 62, 222-226.
- Berridge, K. C., & Robinson, T. E. (1998). What is the role of dopamine in reward: hedonic impact, reward learning, or incentive salience? *Brain Research - Brain Research Reviews*, 28(3), 309-369.
- Berton, O., Ramos, A., Chaouloff, F., & Mormede, P. (1997). Behavioral reactivity to social and nonsocial stimulations: a multivariate analysis of six inbred rat strains. *Behavior Genetics*, 27(2), 155-166.
- Bhattacharyya, A. K., Aulakh, C. S., Pradhan, S., Ghosh, P., & Pradhan, S. N. (1980). Behavioral and neurochemical effects of  $\Delta^9$ -tetrahydrocannabinol in rats. *Neuropharmacology*, 19(1), 87-95.
- Blanchard, D. C., Hori, K., Rodgers, R. J., Hendrie, C. A., & Blanchard, R. J. (1989). Attenuation of defensive threat and attack in wild rats (*Rattus rattus*) by benzodiazepines. *Psychopharmacology*, 97(3), 392-401.
- Blanchard, R. J., Blanchard, D. C., Agullana, R., & Weiss, S. M. (1991). Twenty-two kHz alarm cries to presentation of a predator, by laboratory rats living in visible burrow systems. *Physiology & Behavior*, 50(5), 967-972.

- Blanchard, R. J., Hebert, M. A., Dulloog, L., Kaawalooa, N., Nishimura, O., & Blanchard, D. C. (1998). Acute cocaine effects on stereotype and defense: an ethoexperimental approach. *Neuroscience & Biobehavioral Reviews*, *23*(2), 179-188.
- Blanchard, R. J., Shepherd, J. K., Rodgers, R. J., Magee, L., & Blanchard, D. C. (1993). Attenuation of antipredator defensive behavior in rats following chronic treatment with imipramine. *Psychopharmacology*, *110*(1-2), 245-253.
- Blanchard, R. J., Yudko, E. B., Rodgers, R. J., & Blanchard, D. C. (1993). Defense system psychopharmacology - an ethological approach to the pharmacology of fear and anxiety. *Behavioural Brain Research*, *58*(1-2), 155-165.
- Blum, K., Cull, J. G., Braverman, E. R., & Comings, D. E. (1996). Reward deficiency syndrome. *American Scientist*, *84*, 132-145.
- Bonate, P. L., Swann, A., & Silverman, P. B. (1997). Context-dependent cross-sensitization between cocaine and amphetamine. *Life Sciences*, *60*(1), PL1-7.
- Bonhaus, D. W., Chang, L. K., Kwan, J., & Martin, G. R. (1998). Dual activation and inhibition of adenylyl cyclase by cannabinoid receptor agonists: evidence for agonist-specific trafficking of intracellular responses. *Journal of Pharmacology & Experimental Therapeutics*, *287*(3), 884-888.
- Bouaboula, M., Perrachon, S., Milligan, L., Canat, X., Rinaldi-Carmona, M., Portier, M., Barth, F., Calandra, B., Pecceu, F., Lupker, J., Maffrand, J. P., Le Fur, G., & Casellas, P. (1997). A selective inverse agonist for central cannabinoid receptor inhibits mitogen-activated protein kinase activation stimulated by insulin or insulin-like growth factor 1. Evidence for a new model of receptor/ligand interactions. *Journal of Biological Chemistry*, *272*(35), 22330-22339.
- Brodkin, E. S., Carlezon, W. A., Haile, C. N., Kosten, T. A., Heninger, G. R., & Nestler, E. J. (1998). Genetic analysis of behavioral, neuroendocrine, and biochemical parameters in inbred rodents - initial studies in Lewis and Fischer 344 rats and in A/J and C57BL/6J mice. *Brain Research*, *805*(1-2), 55-68.
- Cadogan, A. K., Alexander, S. P. H., Boyd, E. A., & Kendall, D. A. (1997). Influence of cannabinoids on electrically evoked dopamine release and cyclic AMP generation in the rat striatum. *Journal of Neurochemistry*, *69*(3), 1131-1137.
- Caine, S. B., & Koob, G. F. (1993). Modulation of cocaine self-administration in the rat through D<sub>3</sub> dopamine receptors. *Science*, *260*(5115), 1814-1816.
- Calogero, A. E., Sternberg, E. M., Bagdy, G., Smith, C., Bernardini, R., Aksentjevich, S., Wilder, R. L., Gold, P. W., & Chrousos, G. P. (1992). Neurotransmitter-induced hypothalamic-pituitary-adrenal axis responsiveness is defective in inflammatory disease-susceptible Lewis rats: *in vivo* and *in vitro* studies suggesting globally defective hypothalamic secretion of corticotropin-releasing hormone. *Neuroendocrinology*, *55*(5), 600-608.

Camp, D. M., Browman, K. E., & Robinson, T. E. (1994). The effects of methamphetamine and cocaine on motor behavior and extracellular dopamine in the ventral striatum of Lewis versus Fischer 344 rats. *Brain Research*, 668(1-2), 180-193.

Campbell, U. C., Lac, S. T., & Carroll, M. E. (1999). Effects of baclofen on maintenance and reinstatement of intravenous cocaine self-administration in rats. *Psychopharmacology*, 143(2), 209-214.

Canteras, N. S., Chiavegatto, S., Valle, L. E., & Swanson, L. W. (1997). Severe reduction of rat defensive behavior to a predator by discrete hypothalamic chemical lesions. *Brain Research Bulletin*, 44(3), 297-305.

Canteras, N. S., & Goto, M. (1999). Fos-like immunoreactivity in the periaqueductal gray of rats exposed to a natural predator. *Neuroreport*, 10(2), 413-418.

Carlini, E. A. (1977). Further studies of the aggressive behavior induced by <sup>9</sup>-tetrahydrocannabinol in REM sleep-deprived rats. *Psychopharmacology*, 53(2), 135-145.

Carlini, E. A., Hamaoui, A., & Martz, R. M. (1972). Factors influencing the aggressiveness elicited by marijuana in food-deprived rats. *British Journal of Pharmacology*, 44(4), 794-804.

Carlini, E. A., & Masur, J. (1969). Development of aggressive behavior in rats by chronic administration of cannabis sativa (marijuana). *Life Sciences*, 8(11), 607-620.

Carriero, D., Aberman, J., Lin, S. Y., Hill, A., Makriyannis, A., & Salamone, J. D. (1998). A detailed characterization of the effects of four cannabinoid agonists on operant lever pressing. *Psychopharmacology*, 137(2), 147-156.

Carrive, P. (1993). The periaqueductal gray and defensive behavior: functional representation and neuronal organization. *Behavioural Brain Research*, 58(1-2), 27-47.

Carrive, P., Leung, P., Harris, J., & Paxinos, G. (1997). Conditioned fear to context is associated with increased Fos expression in the caudal ventrolateral region of the midbrain periaqueductal gray. *Neuroscience*, 78(1), 165-177.

Chan, P. K., Chan, S. C., & Yung, W. H. (1998). Presynaptic inhibition of GABAergic inputs to rat substantia nigra pars reticulata neurones by a cannabinoid agonist. *Neuroreport*, 9(4), 671-675.

Chaouloff, F., Kulikov, A., Sarrieau, A., Castanon, N., & et al. (1995). Male Fischer 344 and Lewis rats display differences in locomotor reactivity, but not in anxiety-related behaviours: Relationship with the hippocampal serotonergic system. *Brain Research*, 693(1-2), 169-178.

Chaperon, F., Soubrie, P., Puech, A. J., & Thiebot, M. H. (1998). Involvement of central cannabinoid (CB<sub>1</sub>) receptors in the establishment of place conditioning in rats. *Psychopharmacology*, 135(4), 324-332.

- Chaudhuri, A. (1997). Neural activity mapping with inducible transcription factors. *Neuroreport*, 8(13), iii-vii.
- Chen, J. P., Paredes, W., Li, J., Smith, D., Lowinson, J., & Gardner, E. L. (1990).  $\delta^9$ -tetrahydrocannabinol produces naloxone-blockable enhancement of presynaptic basal dopamine efflux in nucleus accumbens of conscious, freely-moving rats as measured by intracerebral microdialysis. *Psychopharmacology*, 102(2), 156-162.
- Chen, J. P., Paredes, W., Lowinson, J. H., & Gardner, E. L. (1991). Strain-specific facilitation of dopamine efflux by  $\delta^9$ -tetrahydrocannabinol in the nucleus accumbens of rat: an in vivo microdialysis study. *Neuroscience Letters*, 129(1), 136-180.
- Chen, K., & Kandel, D. B. (1995). The natural history of drug use from adolescence to the mid-thirties in a general population sample. *American Journal of Public Health*, 85(1), 41-47.
- Chen, K., Kandel, D. B., & Davies, M. (1997). Relationships between frequency and quantity of marijuana use and last year proxy dependence among adolescents and adults in the United States. *Drug & Alcohol Dependence*, 46(1-2), 53-67.
- Chesher, G. B., Christie, M. J., & Morgan, J. P. (1994). Science signals a new understanding of marijuana. *Drug and Alcohol Review*, 13, 301-317.
- Colombo, G., Agabio, R., Diaz, G., Lobina, C., Reali, R., & Gessa, G. L. (1998). Appetite suppression and weight loss after the cannabinoid antagonist SR141716. *Life Sciences*, 63(8), L113-PL117.
- Compton, D. R., Aceto, M. D., Lowe, J., & Martin, B. R. (1996c). In vivo characterization of a specific cannabinoid receptor antagonist (SR141716A): inhibition of  $\delta^9$ -tetrahydrocannabinol-induced responses and apparent agonist activity. *Journal of Pharmacology & Experimental Therapeutics*, 277(2), 586-594.
- Compton, D. R., Dewey, W. L., & Martin, B. R. (1990). Cannabis dependence and tolerance production. *Advances in Alcohol & Substance Abuse*, 9(1-2), 129-147.
- Compton, D. R., Rice, K. C., De Costa, B. R., Razdan, R. K., Melvin, L. S., Johnson, M. R., & Martin, B. R. (1993). Cannabinoid structure-activity relationships: correlation of receptor binding and in vivo activities. *Journal of Pharmacology & Experimental Therapeutics*, 265(1), 218-226.
- Compton, W. M., Cottler, L. B., Dorsey, K. B., Spitznagel, E. L., & Mager, D. E. (1996a). Comparing assessments of DSM-IV substance dependence disorders using CIDI-SAM and SCAN. *Drug & Alcohol Dependence*, 41(3), 179-187.
- Compton, W. M., Cottler, L. B., Dorsey, K. B., Spitznagel, E. L., & Mager, D. E. (1996b). Structured and semi-structured assessment of ICD-10 substance dependence disorders - CIDI-SAM vs SCAN. *International Journal of Methods in Psychiatric Research*, 6(4), 285-293.

Contarino, A., Dellu, F., Koob, G. F., Smith, G. W., Lee, K. F., Vale, W., & Gold, L. H. (1999). Reduced anxiety-like and cognitive performance in mice lacking the corticotropin-releasing factor receptor 1. *Brain Research*, *835*(1), 1-9.

Conti, L. H., Maciver, C. R., Ferkany, J. W., & Abreu, M. E. (1990). Footshock-induced freezing behavior in rats as a model for assessing anxiolytics. *Psychopharmacology*, *102*(4), 492-497.

Copeland, J., Rees, V., & Swift, W. (1999). Help seeking among a sample entering treatment for cannabis dependence [letter]. *Australian Family Physician*, *28*(6), 540-541.

Corchero, J., Fuentes, J. A., & Manzanares, J. (1999). Chronic treatment with CP-55,940 regulates corticotropin releasing factor and proopiomelanocortin gene expression in the hypothalamus and pituitary gland of the rat. *Life Sciences*, *64*(11), 905-911.

Corcoran, M. E., & Amit, Z. (1974). Reluctance of rats to drink hashish suspensions: free-choice and forced consumption, and the effects of hypothalamic stimulation. *Psychopharmacologia*, *35*(2), 129-147.

Cottler, L. B., Grant, B. F., Blaine, J., Mavreas, V., Pull, C., Hasin, D., Compton, W. M., Rubio-Stipec, M., & Mager, D. (1997). Concordance of DSM-IV alcohol and drug use disorder criteria and diagnoses as measured by AUDADIS-ADR, CIDI and SCAN. *Drug & Alcohol Dependence*, *47*(3), 195-205.

Coulombe, D., & Miliareisis, E. (1987). Fitting intracranial self-stimulation data with growth models. *Behavioral Neuroscience*, *101*(2), 209-214.

Crawley, J. N., Corwin, R. L., Robinson, J. K., Felder, C. C., Devane, W. A., & Axelrod, J. (1993). Anandamide, an endogenous ligand of the cannabinoid receptor, induces hypomotility and hypothermia in vivo in rodents. *Pharmacology, Biochemistry & Behavior*, *46*(4), 967-972.

Cullen, W. K., & Rowan, M. J. (1994). Gepirone and 1-(2-pyrimidinyl)-piperazine-induced reduction of aversively evoked ultrasonic vocalisation in the rat. *Pharmacology, Biochemistry & Behavior*, *48*(1), 301-306.

Cunningham, S. T., Finn, M., & Kelley, A. E. (1997). Sensitization of the locomotor response to psychostimulants after repeated opiate exposure: role of the nucleus accumbens. *Neuropsychopharmacology*, *16*(2), 147-155.

Cutler, M. G., Mackintosh, J. H., & Chance, M. R. (1975). Behavioural changes in laboratory mice during cannabis feeding and withdrawal. *Psychopharmacologia*, *44*(2), 173-177.

Davis, M. (1998). Are different parts of the extended amygdala involved in fear versus anxiety? *Biological Psychiatry*, *44*(12), 1239-1247.

De Oca, B. M., DeCola, J. P., Maren, S., & Fanselow, M. S. (1998). Distinct regions of the periaqueductal gray are involved in the acquisition and expression of defensive responses. *Journal of Neuroscience*, *18*(9), 3426-3432.

De Vries, T. J., Schoffelmeer, A. N., Binnekade, R., Mulder, A. H., & Vanderschuren, L. J. (1998). Drug-induced reinstatement of heroin- and cocaine-seeking behaviour following long-term extinction is associated with expression of behavioural sensitization. *European Journal of Neuroscience*, *10*(11), 3565-3571.

De Vries, T. J., Schoffelmeer, A. N., Binnekade, R., & Vanderschuren, L. J. (1999). Dopaminergic mechanisms mediating the incentive to seek cocaine and heroin following long-term withdrawal of IV drug self-administration. *Psychopharmacology*, *143*(3), 254-260.

De Vry, J., Benz, U., Schreiber, R., & Traber, J. (1993). Shock-induced ultrasonic vocalization in young adult rats: a model for testing putative anti-anxiety drugs. *European Journal of Pharmacology*, *249*(3), 331-339.

Deroche, V., Marinelli, M., Maccari, S., Le Moal, M., Simon, H., & Piazza, P. V. (1995). Stress-induced sensitization and glucocorticoids. I. Sensitization of dopamine-dependent locomotor effects of amphetamine and morphine depends on stress-induced corticosterone secretion. *Journal of Neuroscience*, *15*(11), 7181-7188.

Deroche, V., Piazza, P. V., Casolini, P., Le Moal, M., & Simon, H. (1993). Sensitization to the psychomotor effects of amphetamine and morphine induced by food restriction depends on corticosterone secretion. *Brain Research*, *611*(2), 352-356.

Desarnaud, F., Cadas, H., & Piomelli, D. (1995). Anandamide amidohydrolase activity in rat brain microsomes. Identification and partial characterization. *Journal of Biological Chemistry*, *270*(11), 6030-6035.

Devane, W. A., Dysarz, F. A., Johnson, M. R., Melvin, L. S., & Howlett, A. C. (1988). Determination and characterization of a cannabinoid receptor in rat brain. *Molecular Pharmacology*, *34*, 605-613.

Devane, W. A., Hanus, L., Breuer, A., Pertwee, R. G., Stevenson, L. A., Griffin, G., Gibson, D., Mandelbaum, A., Etinger, A., & Mechoulam, R. (1992). Isolation and structure of a brain constituent that binds to the cannabinoid receptor. *Science*, *258*(5090), 1946-1949.

Dewey, W. L. (1986). Cannabinoid pharmacology. *Pharmacological Reviews*, *38*(2), 151-178.

Dhabhar, F. S., McEwen, B. S., & Spencer, R. L. (1993). Stress response, adrenal steroid receptor levels and corticosteroid-binding globulin levels--a comparison between Sprague-Dawley, Fischer 344 and Lewis rats. *Brain Research*, *616*(1-2), 89-98.

Dhabhar, F. S., McEwen, B. S., & Spencer, R. L. (1997). Adaptation to prolonged or repeated stress--comparison between rat strains showing intrinsic differences in reactivity to acute stress. *Neuroendocrinology*, *65*(5), 360-368.

Dhabhar, F. S., Miller, A. H., McEwen, B. S., & Spencer, R. L. (1995). Differential activation of adrenal steroid receptors in neural and immune tissues of



Sprague Dawley, Fischer 344, and Lewis rats. *Journal of Neuroimmunology*, 56(1), 77-90.

Di Chiara, G., Loddo, P., & Tanda, G. (1999). Reciprocal changes in prefrontal and limbic dopamine responsiveness to aversive and rewarding stimuli after chronic mild stress: Implications for the psychobiology of depression. *Biological Psychiatry*, 46(12), 1624-1633.

Di Marzo, V., Fontana, A., Cadas, H., Schinelli, S., Cimino, G., Schwartz, J., & Piomelli, D. (1994). Formation and inactivation of endogenous cannabinoid anandamide in central neurons. *Nature*, 372, 686-691.

Di Marzo, V., Melck, D., Bisogno, T., & De Petrocellis, L. (1998). Endocannabinoids: endogenous cannabinoid receptor ligands with neuromodulatory action. *Trends in Neurosciences*, 21(12), 521-528.

Diana, M., Melis, M., Muntoni, A. L., & Gessa, G. L. (1998). Mesolimbic dopaminergic decline after cannabinoid withdrawal. *Proceedings of the National Academy of Sciences of the United States of America*, 95(17), 10269-10273.

Dielenberg, R. A., Arnold, J. C., & McGregor, I. S. (1999). Low-dose midazolam attenuates predatory odor avoidance in rats. *Pharmacology, Biochemistry & Behavior*, 62(2), 197-201.

Dielenberg, R. A., & McGregor, I. S. (1999). Habituation of the hiding response to cat odor in rats (*Rattus norvegicus*). *Journal of Comparative Psychology*, 113(4), 376-387.

Dilsaver, S. C., Leckrone, J., & Greden, J. F. (1984). Cholinergic syndrome from psychotropic withdrawal in a marijuana abuser. *Psychosomatics*, 25(8), 632-634.

Doherty, M. D., & Gratton, A. (1996). Medial prefrontal cortical D<sub>1</sub> receptor modulation of the meso-accumbens dopamine response to stress: an electrochemical study in freely-behaving rats. *Brain Research*, 715(1-2), 86-97.

Donnelly, N., & Hall, W. (1994). *Patterns of cannabis use in Australia*.: Australian National Drug Strategy Monograph Series No. 27.

Dragunow, M., & Faull, R. (1989). The use of *c-fos* as a metabolic marker in neuronal pathway tracing. *Journal of Neuroscience Methods*, 29, 261-265.

Edmonds, D. E., & Gallistel, C. R. (1974). Parametric analysis of brain stimulation reward in the rat: III. Effect of performance variables on the reward summation function. *Journal of Comparative & Physiological Psychology*, 87(5), 876-883.

Einhorn, L. C., Johansen, P. A., & White, F. J. (1988). Electrophysiological effects of cocaine in the mesoaccumbens dopamine system: studies in the ventral tegmental area. *Journal of Neuroscience*, 8(1), 100-112.

Epping-Jordan, M. P., Watkins, S. S., Koob, G. F., & Markou, A. (1998). Dramatic decreases in brain reward function during nicotine withdrawal. *Nature*, 393(6680), 76-79.

Ettenberg, A., & Geist, T. D. (1991). Animal model for investigating the anxiogenic effects of self-administered cocaine. *Psychopharmacology*, *103*(4), 455-461.

Fan, F., Compton, D. R., Ward, S., Melvin, L., & Martin, B. R. (1994). Development of cross-tolerance between  $\Delta^9$ -tetrahydrocannabinol, CP 55,940 and WIN 55,212. *Journal of Pharmacology & Experimental Therapeutics*, *271*(3), 1383-1390.

Fattore, L., Martellotta, M. C., Cossu, G., Mascia, M. S., & Fratta, W. (1999). CB<sub>1</sub> cannabinoid receptor agonist WIN 55,212-2 decreases intravenous cocaine self-administration in rats. *Behavioural Brain Research*, *104*(1-2), 141-146.

Feinberg, I., Jones, R., Walker, J. M., Cavness, C., & March, J. (1975). Effects of high dosage  $\Delta^9$ -tetrahydrocannabinol on sleep patterns in man. *Clinical Pharmacology & Therapeutics*, *17*(4), 458-466.

File, S. (1996a). Recent Developments in Anxiety, Stress, and Depression. *Pharmacology, Biochemistry and Behavior.*, *54*(1), 3-12.

File, S. E. (1980). The use of social interaction as a method for detecting anxiolytic activity of chlordiazepoxide-like drugs. *Journal of Neuroscience Methods*, *2*(3), 219-238.

File, S. E., Andrews, N., & Hogg, S. (1996b). New Developments in Animal Tests of Anxiety. In H. G. M. Westenberg, J. A. Den Boer & D. L. Murphy (Eds.), *Advances in the Neurobiology of Anxiety Disorders*. New York: John Wiley & Sons Ltd.

File, S. E., & Pellow, S. (1984). The anxiogenic action of FG 7142 in the social interaction test is reversed by chlordiazepoxide and Ro 15-1788 but not by CGS 8216. *Archives Internationales de Pharmacodynamie et de Therapie*, *271*(2), 198-205.

File, S. E., Zangrossi, H., Jr., Sanders, F. L., & Mabbutt, P. S. (1993). Dissociation between behavioral and corticosterone responses on repeated exposures to cat odor. *Physiology & Behavior*, *54*(6), 1109-1111.

Fiorino, D. F., & Phillips, A. G. (1999). Facilitation of sexual behavior and enhanced dopamine efflux in the nucleus accumbens of male rats after D-amphetamine-induced behavioral sensitization. *Journal of Neuroscience*, *19*(1), 456-463.

Fishman, M. W., Rosenbaum, J. F., Yabusaki, D. I., & Carr, D. B. (1988). Marijuana related anxiety: a questionnaire-based pilot study of normal and psychiatric populations. *Research Communications on Substance Abuse*, *9*, 219-226.

Fitton, A. G., & Pertwee, R. G. (1982). Changes in body temperature and oxygen consumption rate of conscious mice produced by intrahypothalamic and intracerebroventricular injections of  $\Delta^9$ -tetrahydrocannabinol. *British Journal of Pharmacology*, *75*(2), 409-414.

Frank, R. A., Manderscheid, P. Z., Panicker, S., Williams, H. P., & Kokoris, D. (1992). Cocaine euphoria, dysphoria, and tolerance assessed using drug-induced changes in brain-stimulation reward. *Pharmacology, Biochemistry & Behavior*, 42(4), 771-779.

Franklin, K. B. (1998). Analgesia and abuse potential: an accidental association or a common substrate? *Pharmacology, Biochemistry & Behavior*, 59(4), 993-1002.

Fraser, J. D. (1949). Withdrawal symptoms in cannabis indica addicts. *Lancet*, 2, 747-748.

French, E. D. (1997).  $\Delta^9$ -tetrahydrocannabinol excites rat VTA dopamine neurons through activation of cannabinoid CB<sub>1</sub> but not opioid receptors. *Neuroscience Letters*, 226(3), 159-162.

French, E. D., Dillon, K., & Wu, X. (1997). Cannabinoids excite dopamine neurons in the ventral tegmentum and substantia nigra. *Neuroreport*, 8(3), 649-652.

Fride, E., & Mechoulam, R. (1993). Pharmacological activity of the cannabinoid receptor agonist, anandamide, a brain constituent. *European Journal of Pharmacology*, 231(2), 313-314.

Fuentes, J. A., Ruiz-Gayo, M., Manzanares, J., Vela, G., Reche, I., & Corchero, J. (1999). Cannabinoids as potential new analgesics. *Life Sciences*, 65(6-7), 675-685.

Fujiwara, M., & Ueki, S. (1979). The course of aggressive behavior induced by a single injection of  $\Delta^9$ -tetrahydrocannabinol and its characteristics. *Physiology & Behavior*, 22(3), 535-539.

Gallate, J. E., & McGregor, I. S. (1999). The motivation for beer in rats: effects of ritanserin, naloxone and SR 141716. *Psychopharmacology*, 142, 302-308.

Gallate, J. E., Saharov, T., Mallet, P. E., & McGregor, I. S. (1999). Increased motivation for beer in rats following administration of a cannabinoid CB<sub>1</sub> receptor agonist. *European Journal of Pharmacology*, 370(3), 233-240.

Gallistel, C. R., & Freyd, G. (1987). Quantitative determination of the effects of catecholaminergic agonists and antagonists on the rewarding efficacy of brain stimulation. *Pharmacology, Biochemistry & Behavior*, 26(4), 731-741.

Gallistel, C. R., & Karras, D. (1984). Pimozide and amphetamine have opposing effects on the reward summation function. *Pharmacology, Biochemistry & Behavior*, 20(1), 73-77.

Galve-Roperh, I., Sanchez, C., Cortes, M. L., del Pulgar, T. G., Izquierdo, M., & Guzman, M. (2000). Anti-tumoral action of cannabinoids: Involvement of sustained ceramide accumulation and extracellular signal-regulated kinase activation. *Nature Medicine*, 6(3), 313-319.

Gardner, C. R. (1985). Distress vocalization in rat pups. A simple screening method for anxiolytic drugs. *Journal of Pharmacological Methods*, 14(3), 181-187.

Gardner, E. L. (1999). Cannabinoid interaction with brain reward systems. In G. G. Nahas, K. M. Sutin, D. J. Harvey & S. Agurell (Eds.), *Marihuana and Medicine*. Totowa, NJ.: Humana Press Inc.

Gardner, E. L., & Lowinson, J. H. (1991). Marijuana's interaction with brain reward systems: update 1991. *Pharmacology, Biochemistry & Behavior*, 40(3), 571-580.

Gardner, E. L., Paredes, W., Smith, D., Donner, A., Milling, C., Cohen, D., & Morrison, D. (1988). Facilitation of brain stimulation reward by  $\Delta^9$ -tetrahydrocannabinol. *Psychopharmacology*, 96(1), 142-144.

Gardner, E. L., & Vorel, S. R. (1998). Cannabinoid transmission and reward-related events. *Neurobiology of Disease*, 5(6), 502-533.

Georgotas, A., & Zeidenberg, P. (1979). Observations on the effects of four weeks of heavy marihuana smoking on group interaction and individual behavior. *Comprehensive Psychiatry*, 20(5), 427-432.

Gessa, G. L., Mascia, M. S., Casu, M. A., & Carta, G. (1997). Inhibition of hippocampal acetylcholine release by cannabinoids: reversal by SR 141716A. *European Journal of Pharmacology*, 327(1), R1-2.

Gifford, A. N., Gardner, E. L., & Ashby, C. R. (1997). The effect of intravenous administration of  $\Delta^9$ -tetrahydrocannabinol on the activity of A10 dopamine neurons recorded in vivo in anesthetized rats. *Neuropsychobiology*, 36(2), 96-99.

Giuffrida, A., Parsons, L. H., Kerr, T. M., de Fonseca, F. R., Navarro, M., & Piomelli, D. (1999). Dopamine activation of endogenous cannabinoid signaling in dorsal striatum. *Nature Neuroscience*, 2(4), 358-363.

Giuliani, D., Ferrari, F., & Ottani, A. (2000). The cannabinoid agonist HU 210 modifies rat behavioural responses to novelty and stress. *Pharmacological Research*, 41(1), 47-53.

Glass, M., & Dragunow, M. (1995). Induction of the Krox 24 transcription factor in striosomes by a cannabinoid agonist. *Neuroreport*, 6(2), 241-244.

Glass, M., & Felder, C. C. (1997). Concurrent stimulation of cannabinoid CB<sub>1</sub> and dopamine D<sub>2</sub> receptors augments cAMP accumulation in striatal neurons: evidence for a Gs linkage to the CB<sub>1</sub> receptor. *Journal of Neuroscience*, 17(14), 5327-5333.

Godley, A. D. (1995). *Herodotus: Books III and IV* (9th ed.). Edinburgh: St Edmundsbury Press Ltd.

Gold, L. H., Balster, R. L., Barrett, R. L., Britt, D. T., & Martin, B. R. (1992). A comparison of the discriminative stimulus properties of  $\Delta^9$ -tetrahydrocannabinol and CP 55,940 in rats and rhesus monkeys. *Journal of Pharmacology & Experimental Therapeutics*, 262(2), 479-486.

Goodlett, C. R., Thomas, J. D., & West, J. R. (1991). Long-term deficits in cerebellar growth and rotarod performance of rats following "binge-like" alcohol exposure during the neonatal brain growth spurt. *Neurotoxicology & Teratology*, *13*(1), 69-74.

Gorriti, M. A., de Fonseca, F. R., Navarro, M., & Palomo, T. (1999). Chronic (-)-<sup>9</sup>-tetrahydrocannabinol treatment induces sensitization to the psychomotor effects of amphetamine in rats. *European Journal of Pharmacology*, *365*(2-3), 133-142.

Graham, J. D. P. (Ed.). (1976). *Cannabis and Health*. London: Academic Press Inc. Ltd.

Gratton, A. (1996). In vivo analysis of the role of dopamine in stimulant and opiate self-administration. *Journal of Psychiatry & Neuroscience*, *21*(4), 264-279.

Greenberg, B. D., & Segal, D. S. (1985). Acute and chronic behavioral interactions between phencyclidine (PCP) and amphetamine: evidence for a dopaminergic role in some PCP-induced behaviors. *Pharmacology, Biochemistry & Behavior*, *23*(1), 99-105.

Grinspoon, L., & Bakalar, J. B. (1997). *Marihuana, the Forbidden Medicine*. New Haven, U. S. A.: Yale University Press.

Groenewegen, H. J., Berendse, H. W., & Haber, S. N. (1993). Organization of the output of the ventral striatopallidal system in the rat: ventral pallidal efferents. *Neuroscience*, *57*(1), 113-142.

Groenink, L., Mos, J., Van der Gugten, J., & Olivier, B. (1996). The 5-HT<sub>1A</sub> receptor is not involved in emotional stress-induced rises in stress hormones. *Pharmacology, Biochemistry & Behavior*, *55*(2), 303-308.

Guimaraes, F. S., de-Aguiar, J. C., Mechoulam, R., & Breuer, A. (1994). Anxiolytic effect of cannabidiol derivatives in the elevated plus-maze. *General Pharmacology*, *25*(4), 161-164.

Guy, A. P., & Gardner, C. R. (1985). Pharmacological characterisation of a modified social interaction model of anxiety in the rat. *Neuropsychobiology*, *13*(4), 194-200.

Hall, W. (1995). The health risks of cannabis. *Australian Family Physician*, *24*(7), 1237-1240.

Hall, W., & Degenhardt, L. (2000). Cannabis use and psychosis: a review of clinical and epidemiological evidence. *Australian & New Zealand Journal of Psychiatry*, *34*(1), 26-34.

Hall, W., & Solowij, N. (1997). Long-term cannabis use and mental health. *British Journal of Psychiatry*, *171*, 107-108.

Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *Lancet*, *352*(9140), 1611-1616.

- Hallanger, A. E., & Wainer, B. H. (1988). Ascending projections from the pedunculo-pontine tegmental nucleus and the adjacent mesopontine tegmentum in the rat. *Journal of Comparative Neurology*, 274(4), 483-515.
- Haney, M., Comer, S. D., Ward, A. S., Foltin, R. W., & Fischman, M. W. (1997). Factors influencing marijuana self-administration by humans. *Behavioural Pharmacology*, 8, 101-112.
- Haney, M., Ward, A. S., Comer, S. D., Foltin, R. W., & Fischman, M. W. (1999). Abstinence symptoms following oral THC administration to humans. *Psychopharmacology*, 141(4), 385-394.
- Haney, M., Ward, A. S., Comer, S. D., Foltin, R. W., & Fischman, M. W. (1999). Abstinence symptoms following smoked marijuana in humans. *Psychopharmacology*, 141(4), 395-404.
- Haracz, J. L., MacDonall, J. S., & Sircar, R. (1997). Effects of nitric oxide synthase inhibitors on cocaine sensitization. *Brain Research*, 746(1-2), 183-189.
- Harlan, R. E., & Garcia, M. M. (1998). Drugs of abuse and immediate-early genes in the forebrain. *Molecular Neurobiology*, 16(3), 221-267.
- Harmer, C. J., & Phillips, G. D. (1998). Enhanced appetitive conditioning following repeated pretreatment with d-amphetamine. *Behavioural Pharmacology*, 9(4), 299-308.
- Harmer, C. J., & Phillips, G. D. (1999a). Enhanced conditioned inhibition following repeated pretreatment with d-amphetamine. *Psychopharmacology*, 142(2), 120-131.
- Harmer, C. J., & Phillips, G. D. (1999b). Enhanced dopamine efflux in the amygdala by a predictive, but not a non-predictive, stimulus: facilitation by prior repeated D-amphetamine. *Neuroscience*, 90(1), 119-130.
- Harris, H. W., & Nestler, E. J. (1996). Immunohistochemical studies of mesolimbic dopaminergic neurons in Fischer 344 and Lewis Rats. *Brain Research*, 706(1), 1-12.
- Harris, R. T., Waters, W., & McLendon, D. (1974). Evaluation of reinforcing capability of delta-9-THC in rhesus monkeys. *Psychopharmacologia*, 37, 23-39.
- Hauber, W., Lutz, S., & Munkle, M. (1998). The effects of globus pallidus lesions on dopamine-dependent motor behaviour in rats. *Neuroscience*, 86(1), 147-157.
- Heilig, M., Engel, J. A., & Soderpalm, B. (1993). *C-fos* antisense in the nucleus accumbens blocks the locomotor stimulant action of cocaine. *European Journal of Pharmacology*, 236(2), 339-340.
- Heimer, L., Zahm, D. S., Churchill, L., Kalivas, P. W., & Wohltmann, C. (1991). Specificity in the projection patterns of accumbal core and shell in the rat. *Neuroscience*, 41(1), 89-125.

Heinrichs, S. C., Lapsansky, J., Lovenberg, T. W., De Souza, E. B., & Chalmers, D. T. (1997). Corticotropin-releasing factor CRF<sub>1</sub>, but not CRF<sub>2</sub>, receptors mediate anxiogenic-like behavior. *Regulatory Peptides*, 71(1), 15-21.

Helzer, J. E. (1994). Psychoactive substance abuse and relation to dependence. In T. A. Widiger, A. J. Frances, H. A. Pincus, M. B. First, R. Ross & W. Davis (Eds.), *DSM-IV Sourcebook* (1 ed., Vol. 1). Washington D.C.: American Psychiatric Association.

Henry, D. J., Greene, M. A., & White, F. J. (1989). Electrophysiological effects of cocaine in the mesoaccumbens dopamine system: repeated administration. *Journal of Pharmacology & Experimental Therapeutics*, 251(3), 833-839.

Herkenham, M., Lynn, A. B., de Costa, B. R., & Richfield, E. K. (1991a). Neuronal localization of cannabinoid receptors in the basal ganglia of the rat. *Brain Research*, 547(2), 267-274.

Herkenham, M., Lynn, A. B., Johnson, M. R., Melvin, L. S., de Costa, B. R., & Rice, K. C. (1991b). Characterization and localization of cannabinoid receptors in rat brain: a quantitative in vitro autoradiographic study. *Journal of Neuroscience*, 11(2), 563-583.

Herodotus. (1972). *Herodotus: The Histories* (A. de Selincourt, Trans. 3rd ed.). London: Penguin Books.

Hoffman, D. C., & Wise, R. A. (1992). Locomotor-activating effects of the D<sub>2</sub> agonist bromocriptine show environment-specific sensitization following repeated injections. *Psychopharmacology*, 107, 277-284.

Hoffman, D. C., & Wise, R. A. (1993). Lack of cross-sensitization between the locomotor-activating effects of bromocriptine and those of cocaine or heroin. *Psychopharmacology*, 110(4), 402-408.

Hohmann, A. G., Martin, W. J., Tsou, K., & Walker, J. M. (1995). Inhibition of noxious stimulus-evoked activity of spinal cord dorsal horn neurons by the cannabinoid WIN 55,212-2. *Life Sciences*, 56(23-24), 2111-2118.

Horger, B. A., Elsworth, J. D., & Roth, R. H. (1995). Selective increase in dopamine utilization in the shell subdivision of the nucleus accumbens by the benzodiazepine inverse agonist FG 7142. *Journal of Neurochemistry*, 65(2), 770-774.

How, W. W., & Wells, J. (1989). *A commentary on Herodotus* (Vol. 1). Oxford: Oxford University Press.

Howell, D. C. (1987). *Statistical Methods for Psychology* (2nd ed.). Boston: PWS-KENT.

Howlett, A. C. (1995). Cannabinoid compounds and signal transduction mechanisms. In R. Pertwee (Ed.), *Cannabinoid Receptors* (pp. 167-204). London: Academic Press.

- Hudzik, T. J., Wessinger, W. D., & McMillan, D. E. (1993). Effects of cocaine self-administration on ethanol, food and water intake in the rat. *Drug & Alcohol Dependence*, 33(3), 225-234.
- Hughes, P., & Dragunow, M. (1995). Induction of immediate-early genes and the control of neurotransmitter-regulated gene expression within the nervous system. *Pharmacological Reviews*, 47(1), 133-178.
- Hunt, G. E., & McGregor, I. S. (1998). Rewarding brain stimulation induces only sparse fos-like immunoreactivity in dopaminergic neurons. *Neuroscience*, 83(2), 501-515.
- Husain, R., Agrawal, A. K., Hasan, M., & Seth, P. K. (1994). Modulation of acrylamide-induced neurochemical and behavioral deficits by cerebellar transplants in rats. *Pharmacology, Biochemistry & Behavior*, 49(3), 443-448.
- Ikemoto, S., & Panksepp, J. (1999). The role of nucleus accumbens dopamine in motivated behavior: a unifying interpretation with special reference to reward-seeking. *Brain Research - Brain Research Reviews*, 31(1), 6-41.
- Inglis, W. L., Allen, L. F., Whitelaw, R. B., Latimer, M. P., Brace, H. M., & Winn, P. (1994a). An investigation into the role of the pedunclopontine tegmental nucleus in the mediation of locomotion and orofacial stereotypy induced by d-amphetamine and apomorphine in the rat. *Neuroscience*, 58(4), 817-833.
- Inglis, W. L., Dunbar, J. S., & Winn, P. (1994b). Outflow from the nucleus accumbens to the pedunclopontine tegmental nucleus: a dissociation between locomotor activity and the acquisition of responding for conditioned reinforcement stimulated by d-amphetamine. *Neuroscience*, 62(1), 51-64.
- Inglis, W. L., & Winn, P. (1995). The pedunclopontine tegmental nucleus: where the striatum meets the reticular formation. *Progress in Neurobiology*, 47(1), 1-29.
- Insel, T. R. (1989). Decreased *in vivo* binding to brain benzodiazepine receptors during social isolation. *Psychopharmacology*, 97(2), 142-144.
- Itzhak, Y. (1997). Modulation of cocaine- and methamphetamine-induced behavioral sensitization by inhibition of brain nitric oxide synthase. *Journal of Pharmacology & Experimental Therapeutics*, 282(2), 521-527.
- Itzhak, Y., & Martin, J. L. (1999). Effects of cocaine, nicotine, dizocipline and alcohol on mice locomotor activity: cocaine-alcohol cross-sensitization involves upregulation of striatal dopamine transporter binding sites. *Brain Research*, 818(2), 204-211.
- Jodogne, C., Marinelli, M., Le Moal, M., & Piazza, P. V. (1994). Animals predisposed to develop amphetamine self-administration show higher susceptibility to develop contextual conditioning of both amphetamine-induced hyperlocomotion and sensitization. *Brain Research*, 657(1-2), 236-244.



Johnson, D. H., Svensson, A. I., Engel, J. A., & Soderpalm, B. (1995). Induction but not expression of behavioural sensitization to nicotine in the rat is dependent on glucocorticoids. *European Journal of Pharmacology*, *276*(1-2), 155-164.

Johnson, P. I., Goodman, J. B., Condon, R., & Stellar, J. R. (1995). Reward shifts and motor responses following microinjections of opiate-specific agonists into either the core or shell of the nucleus accumbens. *Psychopharmacology*, *120*(2), 195-202.

Johnson, P. I., & Stellar, J. R. (1994). Comparison of delta opiate receptor agonist induced reward and motor effects between the ventral pallidum and dorsal striatum. *Neuropharmacology*, *33*(10), 1171-1182.

Jones, R. T., Benowitz, N., & Bachman, J. (1976). Clinical studies of cannabis tolerance and dependence. *Annals of the New York Academy of Sciences*, *282*, 221-239.

Jones, R. T., Benowitz, N., & Hering, R. I. (1981). The clinical relevance of cannabis tolerance and dependence. *Journal of Clinical Pharmacology*, *21*, 143S-152S.

Joseph, M. H., Young, A. M. J., & Gray, J. A. (1996). Are neurochemistry and reinforcement enough? Can the abuse potential of drugs be explained by common actions on a dopamine reward system in the brain? *Human Psychopharmacology*, *11*, S55-S63.

Kalivas, P. W., & Alesdatter, J. E. (1993). Involvement of N-methyl-D-aspartate receptor stimulation in the ventral tegmental area and amygdala in behavioral sensitization to cocaine. *Journal of Pharmacology & Experimental Therapeutics*, *267*(1), 486-495.

Kalivas, P. W., & Duffy, P. (1989). Similar effects of daily cocaine and stress on mesocorticolimbic dopamine neurotransmission in the rat. *Biological Psychiatry*, *25*(7), 913-928.

Kalivas, P. W., & Weber, B. (1988). Amphetamine injection into the ventral mesencephalon sensitizes rats to peripheral amphetamine and cocaine. *Journal of Pharmacology & Experimental Therapeutics*, *245*(3), 1095-1102.

Kaltwasser, M. T. (1991). Acoustic startle induced ultrasonic vocalization in the rat: a novel animal model of anxiety? *Behavioural Brain Research*, *43*(2), 133-137.

Kandel, D., Chen, K., Warner, L. A., Kessler, R. C., & Grant, B. (1997). Prevalence and demographic correlates of symptoms of last year dependence on alcohol, nicotine, marijuana and cocaine in the U.S. population. *Drug & Alcohol Dependence*, *44*(1), 11-29.

Kandel, D., & Yamaguchi, K. (1993). From beer to crack: developmental patterns of drug involvement. *American Journal of Public Health*, *83*(6), 851-855.

- Kandel, D. B., & Davies, M. (1997). Cocaine use in a national sample of US youth (NLSY) - ethnic patterns, progression, and predictors. *Substance Use & Misuse*, 32(12-13), 1757-1762.
- Kandel, D. B., Yamaguchi, K., & Chen, K. (1992). Stages of progression in drug involvement from adolescence to adulthood: further evidence for the gateway theory. *Journal of Studies on Alcohol*, 53(5), 447-457.
- Karler, R., Finnegan, K. T., & Calder, L. D. (1993). Blockade of behavioral sensitization to cocaine and amphetamine by inhibitors of protein synthesis. *Brain Research*, 603(1), 19-24.
- Keay, K. A., & Bandler, R. (1993). Deep and superficial noxious stimulation increases Fos-like immunoreactivity in different regions of the midbrain periaqueductal grey of the rat. *Neuroscience Letters*, 154(1-2), 23-26.
- Kenakin, T. (1997). Agonist-specific receptor conformations. *Trends in Pharmacological Science*, 18, 416-417.
- Keppel, G. (1991). *Design and analysis: A researcher's handbook*. Englewood Cliffs, NJ: Prentice Hall.
- Kim, H. S., Park, W. K., Jang, C. G., & Oh, S. (1996). Inhibition by MK-801 of cocaine-induced sensitization, conditioned place preference, and dopamine-receptor supersensitivity in mice. *Brain Research Bulletin*, 40(3), 201-207.
- Kling-Petersen, T., Ljung, E., & Svensson, K. (1995a). Effects on locomotor activity after local application of D<sub>3</sub> preferring compounds in discrete areas of the rat brain. *Journal of Neural Transmission - General Section*, 102(3), 209-220.
- Kling-Petersen, T., Ljung, E., Wollter, L., & Svensson, K. (1995). Effects of dopamine D<sub>3</sub> preferring compounds on conditioned place preference and intracranial self-stimulation in the rat. *Journal of Neural Transmission - General Section*, 101(1-3), 27-39.
- Knapp, D. J., Duncan, G. E., Crews, F. T., & Breese, G. R. (1998). Induction of fos-like proteins and ultrasonic vocalizations during ethanol withdrawal - further evidence for withdrawal-induced anxiety. *Alcoholism: Clinical & Experimental Research*, 22(2), 481-493.
- Kobayashi, S. (1986). Warm- and cold-sensitive neurons inactive at normal core temperature in rat hypothalamic slices. *Brain Research*, 362(1), 132-139.
- Kokkinidis, L., & McCarter, B. D. (1990). Postcocaine depression and sensitization of brain-stimulation reward: analysis of reinforcement and performance effects. *Pharmacology, Biochemistry & Behavior*, 36(3), 463-471.
- Kokkinidis, L., & Zacharko, R. M. (1980). Response sensitization and depression following long-term amphetamine treatment in a self-stimulation paradigm. *Psychopharmacology*, 68(1), 73-76.
- Koob, G. F. (1996). Drug addiction: the yin and yang of hedonic homeostasis. *Neuron*, 16, 893-895.

- Koob, G. F., & Le Moal, M. (1997). Drug abuse: hedonic homeostatic dysregulation. *Science*, 278, 52-58.
- Koob, G. F., Rocio, M., Carrera, A., Gold, L. H., Heyser, C. J., Maldonadoirizarry, C., Markou, A., Parsons, L. H., Roberts, A. J., Schulteis, G., Stinus, L., Walker, J. R., Weissenborn, R., & Weiss, F. (1998). Substance dependence as a compulsive behavior. *Journal of Psychopharmacology*, 12(1), 39-48.
- Kopp, C., Vogel, E., Rettori, M. C., Delagrange, P., Guardiola-Lemaitre, B., & Misslin, R. (1999). Effects of melatonin on neophobic responses in different strains of mice. *Pharmacology, Biochemistry & Behavior*, 63(4), 521-526.
- Kosten, T. A., Miserendino, M. J., Chi, S., & Nestler, E. J. (1994). Fischer and Lewis rat strains show differential cocaine effects in conditioned place preference and behavioral sensitization but not in locomotor activity or conditioned taste aversion. *Journal of Pharmacology & Experimental Therapeutics*, 269(1), 137-144.
- Kosten, T. A., Miserendino, M. J., Haile, C. N., DeCaprio, J. L., Jatlow, P. I., & Nestler, E. J. (1997). Acquisition and maintenance of intravenous cocaine self-administration in Lewis and Fischer inbred rat strains. *Brain Research*, 778(2), 418-429.
- Kucharski, L. T., Williams, J. E. G., & Kornetsky, C. (1983). The effects of levonantradol on rewarding brain stimulation thresholds in the rat. *Pharmacology, Biochemistry and Behavior*, 19, 149-151.
- Ledent, C., Valverde, O., Cossu, C., Petitet, F., Aubert, L. F., Beslot, F., Bohme, G. A., Imperato, A., Pedrazzini, T., Roques, B. P., Vassart, G., Fratta, W., & Parmentier, M. (1999). Unresponsiveness to cannabinoids and reduced addictive effects of opiates in CB<sub>1</sub> receptor knockout mice. *Science*, 283(5400), 401-404.
- Leite, J. R., & Carlini, E. A. (1974). Failure to obtain "cannabis-directed behavior" and abstinence syndrome in rats chronically treated with cannabis sativa extracts. *Psychopharmacologia*, 36(2), 133-145.
- Lepore, M., & Franklin, K. B. (1996b). N-methyl-D-aspartate lesions of the pedunculopontine nucleus block acquisition and impair maintenance of responding reinforced with brain stimulation. *Neuroscience*, 71(1), 147-155.
- Lepore, M., Liu, X. H., Savage, V., Matalon, D., & Gardner, E. L. (1996a). Genetic differences in <sup>9</sup>-tetrahydrocannabinol-induced facilitation of brain stimulation reward as measured by a rate-frequency curve-shift electrical brain stimulation paradigm in three different rat strains. *Life Sciences*, 58(25), L365-PL372.
- Lepore, M., Vorel, S. R., Lowinson, J., & Gardner, E. L. (1995). Conditioned place preference induced by <sup>9</sup>-tetrahydrocannabinol: comparison with cocaine, morphine, and food reward. *Life Sciences*, 56(23-24), 2073-2080.
- Levenes, C., Daniel, H., Soubrie, P., & Crepel, F. (1998). Cannabinoids decrease excitatory synaptic transmission and impair long-term depression in rat cerebellar Purkinje cells. *Journal of Physiology*, 510(Pt 3), 867-879.

- Leweke, F. M., Giuffrida, A., Wurster, U., Emrich, H. M., & Piomelli, D. (1999). Elevated endogenous cannabinoids in schizophrenia. *Neuroreport*, *10*(8), 1665-1669.
- Li, Y., Hu, X. T., Berney, T. G., Vartanian, A. J., Stine, C. D., Wolf, M. E., & White, F. J. (1999). Both glutamate receptor antagonists and prefrontal cortex lesions prevent induction of cocaine sensitization and associated neuroadaptations. *Synapse*, *34*(3), 169-180.
- Lichtman, A. H., Cook, S. A., & Martin, B. R. (1996). Investigation of brain sites mediating cannabinoid-induced antinociception in rats: evidence supporting periaqueductal gray involvement. *Journal of Pharmacology & Experimental Therapeutics*, *276*(2), 585-593.
- Lichtman, A. H., Dimen, K. R., & Martin, B. R. (1995). Systemic or intrahippocampal cannabinoid administration impairs spatial memory in rats. *Psychopharmacology*, *119*, 282-290.
- Lichtman, A. H., & Martin, B. R. (1991a). Cannabinoid-induced antinociception is mediated by a spinal  $\alpha_2$ -noradrenergic mechanism. *Brain Research*, *559*(2), 309-314.
- Lichtman, A. H., & Martin, B. R. (1991b). Spinal and supraspinal components of cannabinoid-induced antinociception. *Journal of Pharmacology & Experimental Therapeutics*, *258*, 517-523.
- Lichtman, A. H., & Martin, B. R. (1996).  $\Delta^9$ -tetrahydrocannabinol impairs spatial memory through a cannabinoid receptor mechanism. *Psychopharmacology*, *126*(2), 125-131.
- Lichtman, A. H., & Martin, B. R. (1997). The selective cannabinoid antagonist SR 141716A blocks cannabinoid-induced antinociception in rats. *Pharmacology, Biochemistry & Behavior*, *57*(1-2), 7-12.
- Lichtman, A. H., Wiley, J. L., LaVecchia, K. L., Neviasser, S. T., Arthur, D. B., Wilson, D. M., & Martin, B. R. (1998). Effects of SR 141716A after acute or chronic cannabinoid administration in dogs. *European Journal of Pharmacology*, *357*(2-3), 139-148.
- Lin, D., Koob, G. F., & Markou, A. (2000). Time-dependent alterations in ICSS thresholds associated with repeated amphetamine administrations. *Pharmacology, Biochemistry & Behavior*, *65*(3), 407-417.
- Lin, H. Q., Jackson, D. M., Atrens, D. M., Christie, M. J., & McGregor, I. S. (1997). Serotonergic modulation of 3,4-methylenedioxymethamphetamine (MDMA)-elicited reduction of response rate but not rewarding threshold in accumbal self-stimulation. *Brain Research*, *744*(2), 351-357.
- Little, P. J., Compton, D. R., Johnson, M. R., Melvin, L. S., & Martin, B. R. (1988). Pharmacology and stereoselectivity of structurally novel cannabinoids in mice. *Journal of Pharmacology & Experimental Therapeutics*, *247*(3), 1046-1051.

- Lynch, W. J., & Carroll, M. E. (1999). Sex differences in the acquisition of intravenously self-administered cocaine and heroin in rats. *Psychopharmacology*, *144*(1), 77-82.
- Lyons, M. J., Toomey, R., Meyer, J. M., Green, A. I., Eisen, S. A., Goldberg, J., True, W. R., & Tsuang, M. T. (1997). How do genes influence marijuana use? The role of subjective effects. *Addiction*, *92*(4), 409-417.
- MacLennan, S. J., Reynen, P. H., Kwan, J., & Bonhaus, D. W. (1998). Evidence for inverse agonism of SR141716A at human recombinant cannabinoid CB<sub>1</sub> and CB<sub>2</sub> receptors. *British Journal of Pharmacology*, *124*(4), 619-622.
- Mailleux, P., & Vanderhaeghen, J. J. (1992). Distribution of neuronal cannabinoid receptor in the adult rat brain: a comparative receptor binding radioautography and in situ hybridization histochemistry. *Neuroscience*, *48*(3), 655-668.
- Mailleux, P., Verslype, M., Preud'homme, X., & Vanderhaeghen, J. J. (1994). Activation of multiple transcription factor genes by tetrahydrocannabinol in rat forebrain. *Neuroreport*, *5*(10), 1265-1268.
- Mallet, P. E., & Beninger, R. J. (1996). The endogenous cannabinoid receptor agonist anandamide impairs memory in rats. *Behavioural Pharmacology*, *7*, 276-284.
- Mallet, P. E., & Beninger, R. J. (1998). The cannabinoid CB<sub>1</sub> receptor antagonist SR141716A attenuates the memory impairment produced by <sup>9</sup>-tetrahydrocannabinol or anandamide. *Psychopharmacology*, *140*(1), 11-19.
- Mansbach, R. S., Nicholson, K. L., Martin, B. R., & Balster, R. L. (1994). Failure of <sup>9</sup>-tetrahydrocannabinol and CP 55,940 to maintain intravenous self-administration under a fixed-interval schedule in rhesus monkeys. *Behavioural Pharmacology*, *5*, 219-225.
- Mantsch, J. R., & Goeders, N. E. (1998). Generalization of a restraint-induced discriminative stimulus to cocaine in rats. *Psychopharmacology*, *135*(4), 423-426.
- Marinelli, M., Le Moal, M., & Piazza, P. V. (1996). Acute pharmacological blockade of corticosterone secretion reverses food restriction-induced sensitization of the locomotor response to cocaine. *Brain Research*, *724*(2), 251-255.
- Markou, A., & Koob, G. F. (1991). Postcocaine anhedonia. An animal model of cocaine withdrawal. *Neuropsychopharmacology*, *4*(1), 17-26.
- Martellotta, M. C., Cossu, G., Fattore, L., Gessa, G. L., & Fratta, W. (1998). Self-administration of the cannabinoid receptor agonist WIN 55,212-2 in drug-naive mice. *Neuroscience*, *85*(2), 327-330.
- Martin, B. R., Jefferson, R., Winckler, R., Wiley, J. L., Huffman, J. W., Crocker, P. J., Saha, B., & Razdan, R. K. (1999). Manipulation of the tetrahydrocannabinol side chain delineates agonists, partial agonists, and antagonists. *Journal of Pharmacology and Experimental Therapeutics*, *290*, 1065-1079.

Martin, P. (1998). Animal models sensitive to anti-anxiety agents. *Acta Psychiatrica Scandinavica*, 98(Suppl 393), 74-80.

Mathew, R. J., Wilson, W. H., Coleman, R. E., Turkington, T. G., & DeGrado, T. R. (1997). Marijuana intoxication and brain activation in marijuana smokers. *Life Sciences*, 60(23), 2075-2089.

Mattingly, B. A., Fields, S. E., Langfels, M. S., Rowlett, J. K., Robinet, P. M., & Bardo, M. T. (1996a). Repeated 7-OH-DPAT treatments: behavioral sensitization, dopamine synthesis and subsequent sensitivity to apomorphine and cocaine. *Psychopharmacology*, 125(1), 33-42.

Mattingly, B. A., Rowlett, J. K., Ellison, T., & Rase, K. (1996b). Cocaine-induced behavioral sensitization: effects of haloperidol and SCH 23390 treatments. *Pharmacology, Biochemistry & Behavior*, 53(3), 481-486.

Mazur, J. E. (1998). *Learning and Behavior* (4th ed.). Upper Saddle River, NJ: Prentice-Hall.

McCullough, L. D., & Salamone, J. D. (1992). Anxiogenic drugs -CCE and FG 7142 increase extracellular dopamine levels in nucleus accumbens. *Psychopharmacology*, 109(3), 379-382.

McGregor, I. S. (1996a). Using Strawberry Tree WorkbenchMac and Workbench PC software for data acquisition and control in the animal learning laboratory. *Behavior Research Methods, Instruments and Computers*, 28, 38-48.

McGregor, I. S. (1997). Marijuana Addiction. *Science*, 277(5327), 749-750.

McGregor, I. S., Arnold, J. C., Weber, M. F., Toppo, A. N., & Hunt, G. E. (1998). A comparison of  $\Delta^9$ -THC and anandamide induced *c-fos* expression in the rat forebrain. *Brain Research*, 802(1-2), 19-26.

McGregor, I. S., Bryant, P. A., & Arnold, J. C. (1995). CP 55,940, a synthetic cannabinoid, dose not sensitize locomotor activity or cocaine responsivity with intermittent administration in Wistar rats. *Society for Neuroscience Abstracts*, 21, 726.

McGregor, I. S., Dastur, F. N., McLellan, R. A., & Brown, R. E. (1996b). Cannabinoid modulation of rat pup ultrasonic vocalizations. *European Journal of Pharmacology*, 313(1-2), 43-49.

McGregor, I. S., & Dielenberg, R. A. (1999). Differential anxiolytic efficacy of a benzodiazepine on first versus second exposure to a predatory odor in rats. *Psychopharmacology*, 147(2), 174-181.

McGregor, I. S., Issakidis, C. N., & Prior, G. (1996c). Aversive effects of the synthetic cannabinoid CP 55,940 in rats. *Pharmacology, Biochemistry & Behavior*, 53(3), 657-664.

Mechoulam, R. (1986). The pharmacohistory of cannabis sativa. In R. Mechoulam (Ed.), *Cannabinoids as Therapeutic Agents* (pp. 1-16). Boca Raton Florida: CRC press.

Mechoulam, R., Ben-Shabat, S., Hanus, L., Ligumsky, M., Kaminski, N. E., Schatz, A. R., Gopher, A., Almog, S., Martin, B. R., & Compton, D. R. (1995). Identification of an endogenous 2-monoglyceride, present in canine gut, that binds to cannabinoid receptors. *Biochemical Pharmacology*, *50*(1), 83-90.

Mechoulam, R., Devane, W. A., & Glaser, R. (1992). Cannabinoid geometry and biological activity. In L. Murphy & A. Bartke (Eds.), *Marijuana/Cannabinoids Neurobiology and Neurophysiology* (pp. 1-33). Boca Raton Florida: CRC press.

Mechoulam, R., Fride, E., & Di Marzo, V. (1998). Endocannabinoids. *European Journal of Pharmacology*, *359*(1), 1-18.

Mechoulam, R., Fride, E., Hanus, L., Sheskin, T., Bisogno, T., Di Marzo, V., Bayewitch, M., & Vogel, Z. (1997). Anandamide may mediate sleep induction [letter]. *Nature*, *389*(6646), 25-26.

Mendelson, J. H. (1976). Marihuana use. Biologic and behavioral aspects. *Postgraduate Medicine*, *60*(5), 111-115.

Mendrek, A., Blaha, C. D., & Phillips, A. G. (1998). Pre-exposure of rats to amphetamine sensitizes self-administration of this drug under a progressive ratio schedule. *Psychopharmacology*, *135*(4), 416-422.

Meng, I. D., Manning, B. H., Martin, W. J., & Fields, H. L. (1998). An analgesia circuit activated by cannabinoids. *Nature*, *395*(6700), 381-383.

Merlin, M. D. (1972). *Man and marijuana: Some aspects of their ancient relationship*. Cranbury, New Jersey: Associated University Presses Inc.

Miczek, K. A. (1978).  $\Delta^9$ -tetrahydrocannabinol: antiaggressive effects in mice, rats, and squirrel monkeys. *Science*, *199*(4336), 1459-1461.

Miczek, K. A., Mutschler, N. H., van Erp, A. M. M., Blank, A. D., & McInerney, S. C. (1999). D-amphetamine "cue" generalizes to social defeat stress: behavioral sensitization and attenuated accumbens dopamine. *Psychopharmacology*, *147*(2), 190-199.

Miliaressis, E., Rompre, P. P., Laviolette, P., Philippe, L., & Coulombe, D. (1986). The curve-shift paradigm in self-stimulation. *Physiology & Behavior*, *37*(1), 85-91.

Minabe, Y., Emori, K., & Ashby, C. R., Jr. (1995). Significant differences in the activity of midbrain dopamine neurons between male Fischer 344 and Lewis rats: an *in vivo* electrophysiological study. *Life Sciences*, *56*(15), L261-267.

Miyamoto, A., Yamamoto, T., Ohno, M., & Watanabe, S. (1997). Desensitization of Fos protein induction in rat striatum and nucleus accumbens following repeated administration of  $\Delta^9$ -tetrahydrocannabinol. *Brain Research*, *763*, 137-140.

Miyamoto, A., Yamamoto, T., Ohno, M., Watanabe, S., Tanaka, H., Morimoto, S., & Shoyama, Y. (1996). Roles of dopamine D1 receptors in delta 9-

tetrahydrocannabinol-induced expression of Fos protein in the rat brain. *Brain Research*, 710(1-2), 234-240.

Molewijk, H. E., van der Poel, A. M., Mos, J., van der Heyden, J. A., & Olivier, B. (1995). Conditioned ultrasonic distress vocalizations in adult male rats as a behavioural paradigm for screening anti-panic drugs. *Psychopharmacology*, 117(1), 32-40.

Moller, C., Bing, O., & Heilig, M. (1994). *C-fos* expression in the amygdala: in vivo antisense modulation and role in anxiety. *Cellular & Molecular Neurobiology*, 14(5), 415-423.

Morley, K. (1999). Empirical thesis, The University of Sydney, Sydney.

Munro, S., Thomas, K. L., & Abushaar, M. (1993). Molecular characterization of a peripheral receptor for cannabinoids. *Nature*, 365(6441), 61-65.

Murai, T., Koshikawa, N., Kanayama, T., Takada, K., Tomiyama, K., & Kobayashi, M. (1994). Opposite effects of midazolam and beta-carboline-3-carboxylate ethyl ester on the release of dopamine from rat nucleus accumbens measured by in vivo microdialysis. *European Journal of Pharmacology*, 261(1-2), 65-71.

Murai, T., Yoshida, Y., Koide, S., Takada, K., Misaki, T., Koshikawa, N., & Cools, A. R. (1998). Clonidine reduces dopamine and increases GABA in the nucleus accumbens - an in vivo microdialysis study. *Pharmacology, Biochemistry & Behavior*, 60(3), 695-701.

Murphy, L. L., Munoz, R. M., Adrian, B. A., & Villanua, M. A. (1998). Function of cannabinoid receptors in the neuroendocrine regulation of hormone secretion. *Neurobiology of Disease*, 5(6), 432-446.

Mutschler, N. H., & Miczek, K. A. (1998a). Withdrawal from a self administered or non-contingent cocaine binge - differences in ultrasonic distress vocalizations in rats. *Psychopharmacology*, 136(4), 402-408.

Mutschler, N. H., & Miczek, K. A. (1998b). Withdrawal from IV cocaine binges in rats - ultrasonic distress calls and startle. *Psychopharmacology*, 135(2), 161-168.

Nader, K., Bechara, A., & van der Kooy, D. (1997). Neurobiological constraints on behavioral models of motivation. *Annual Review of Psychology*, 48, 85-114.

Nakajima, S. (1989). Subtypes of dopamine receptors involved in the mechanism of reinforcement. *Neuroscience & Biobehavioral Reviews*, 13(2-3), 123-128.

Nakajima, S., Liu, X., & Loong Lau, C. (1993). Synergistic interaction of D<sub>1</sub> and D<sub>2</sub> dopamine receptors in the modulation of the reinforcing effect of brain stimulation. *Behavioral Neuroscience*, 107(1), 161-165.



Nakajima, S., & O'Regan, N. B. (1991). The effects of dopaminergic agonists and antagonists on the frequency-response function for hypothalamic self-stimulation in the rat. *Pharmacology, Biochemistry and Behavior*, *39*, 465-468.

Nathan, P. E. (1994). Psychoactive substance dependence. In T. A. Widiger, A. J. Frances, H. A. Pincus, M. B. First, R. Ross & W. Davis (Eds.), *DSM-IV Sourcebook* (1 ed., Vol. 1). Washington D.C.: American Psychiatric Association.

Navarro, M., Fernandez, R. J., de, M. R., Hernandez, M. L., Cebeira, M., & Ramos, J. A. (1993). An acute dose of  $\Delta^9$ -tetrahydrocannabinol affects behavioral and neurochemical indices of mesolimbic dopaminergic activity. *Behav Brain Res*, *57*(1), 37-46.

Navarro, M., Hernandez, E., Munoz, R. M., Delarco, I., Villanua, M. A., Carrera, M. R. A., & Defonseca, F. R. (1997). Acute administration of the CB<sub>1</sub> cannabinoid receptor antagonist SR 141716A induces anxiety-like responses in the rat. *Neuroreport*, *8*(2), 491-496.

NIDA. (1991). *National household survey on drug abuse 1990 population estimates*. Washington DC: US Government Printing office.

Nielsen, C. K., & Sanchez, C. (1995). Effect of chronic diazepam treatment on footshock-induced ultrasonic vocalization in adult male rats. *Pharmacology & Toxicology*, *77*, 177-181.

Nowlan, R., & Cohen, S. (1977). Tolerance to marijuana: heart rate and subjective "high". *Clinical Pharmacology & Therapeutics*, *22*(5 Pt 1), 550-556.

O'Brien, C. P., Childress, A. R., Ehrman, R., & Robbins, S. J. (1998). Conditioning factors in drug abuse: can they explain compulsion? *Journal of Psychopharmacology*, *12*(1), 15-22.

O'Brien, C. P., Childress, A. R., McLellan, A. T., & Ehrman, R. (1992). Classical conditioning in drug-dependent humans. *Annals of the New York Academy of Sciences*, *654*, 400-415.

O'Brien, C. P., Childress, A. R., McLellan, A. T., & Ehrman, R. (1993). Developing treatments that address classical conditioning. *NIDA Research Monograph*, *135*, 71-91.

Oitzl, M. S., van Haarst, A. D., Sutanto, W., & de Kloet, E. R. (1995). Corticosterone, brain mineralocorticoid receptors (MRs) and the activity of the hypothalamic-pituitary-adrenal (HPA) axis: the Lewis rat as an example of increased central MR capacity and a hyporesponsive HPA axis. *Psychoneuroendocrinology*, *20*(6), 655-675.

Olivier, B., Molewijk, E., Groenink, L., Joordens, R., Zethof, T., & Mos, J. (1996). Potential Animal Models for the Study of Antipanic and Antiphobic Treatments. In H. G. M. Westenberg, J. A. Den Boer & D. L. Murphy (Eds.), *Advances in the Neurobiology of Anxiety Disorders*. New York: John Wiley & Sons Ltd.

Olmstead, M. C., & Franklin, K. B. (1993). Effects of pedunculopontine tegmental nucleus lesions on morphine-induced conditioned place preference and analgesia in the formalin test. *Neuroscience*, *57*(2), 411-418.

Olmstead, M. C., Munn, E. M., Franklin, K. B., & Wise, R. A. (1998). Effects of pedunculopontine tegmental nucleus lesions on responding for intravenous heroin under different schedules of reinforcement. *Journal of Neuroscience*, *18*(13), 5035-5044.

Onaivi, E. S., Chakrabarti, A., Gwebu, E. T., & Chaudhuri, G. (1996). Neurobehavioral effects of  $\Delta^9$ -THC and cannabinoid (CB<sub>1</sub>) receptor gene expression in mice. *Behavioural Brain Research*, *72*(1-2), 115-125.

Onaivi, E. S., Green, M. R., & Martin, B. R. (1990). Pharmacological characterization of cannabinoids in the elevated plus maze. *Journal of Pharmacology & Experimental Therapeutics*, *253*, 1002-1009.

Ortiz, J., DeCaprio, J. L., Kosten, T. A., & Nestler, E. J. (1995). Strain-selective effects of corticosterone on locomotor sensitization to cocaine and on levels of tyrosine hydroxylase and glucocorticoid receptor in the ventral tegmental area. *Neuroscience*, *67*(2), 383-397.

Palermo Neto, J., & Carlini, E. A. (1972). Aggressive behaviour elicited in rats by *Cannabis sativa*: effects of p-chlorophenylalanine and DOPA. *European Journal of Pharmacology*, *17*(2), 215-220.

Parker, L. A., & Gillies, T. (1995). THC-induced place and taste aversions in Lewis and Sprague-Dawley rats. *Behavioral Neuroscience*, *109*(1), 71-78.

Patel, N. A., Moldow, R. L., Patel, J. A., Wu, G. D., & Chang, S. L. (1998). Arachidonylethanolamide (AEA) activation of Fos proto-oncogene protein immunoreactivity in the rat brain. *Brain Research*, *797*(2), 225-233.

Paxinos, G., & Watson, C. (1997). *The Rat Brain in Stereotaxic Coordinates* (3rd ed.). Sydney: Academic.

Perrot-Sinal, T. S., Heale, V. R., Ossenkopp, K. P., & Kavaliers, M. (1996). Sexually dimorphic aspects of spontaneous activity in meadow voles (*Microtus pennsylvanicus*): effects of exposure to fox odor. *Behavioral Neuroscience*, *110*(5), 1126-1132.

Pertwee, R. G. (1997). Pharmacology of cannabinoid CB<sub>1</sub> and CB<sub>2</sub> receptors. *Pharmacology Therapeutics*, *74*(2), 129-180.

Pertwee, R. G., Hedley, D., McQueen, A. S., & Gentleman, S. M. (1988). The hypothermic response of mice to  $\Delta^9$ -tetrahydrocannabinol is enhanced by chlorpromazine, thioxanthenes, alpha-adrenoceptor antagonists and pentolinium but not by SCH 23390 or sulpiride. *Neuropharmacology*, *27*(2), 149-155.

Pertwee, R. G., Stevenson, L. A., & Griffin, G. (1993). Cross-tolerance between  $\Delta^9$ -tetrahydrocannabinol and the cannabimimetic agents, CP 55,940, WIN 55,212-2 and anandamide. *British Journal of Pharmacology*, *110*, 1483-1490.

Pettit, D. A. D., Harrison, M. P., Olson, J. M., Spencer, R. F., & Cabral, G. A. (1998). Immunohistochemical localization of the neural cannabinoid receptor in rat brain. *Journal of Neuroscience Research*, *51*(3), 391-402.

Phillips, A. G., & Di Ciano, P. (1996). Behavioral sensitization is induced by intravenous self-administration of cocaine by rats. *Psychopharmacology*, *124*(3), 279-281.

Piazza, P. V., & Le Moal, M. (1996). Pathophysiological basis of vulnerability to drug abuse: role of an interaction between stress, glucocorticoids, and dopaminergic neurons. *Annual Review of Pharmacology and Toxicology*, *36*, 359-378.

Piazza, P. V., Marinelli, M., Jodogne, C., Deroche, V., Rouge-Pont, F., Maccari, S., Le Moal, M., & Simon, H. (1994). Inhibition of corticosterone synthesis by metyrapone decreases cocaine-induced locomotion and relapse of cocaine self-administration. *Brain Research*, *658*(1-2), 259-264.

Pierce, R. C., Bell, K., Duffy, P., & Kalivas, P. W. (1996). Repeated cocaine augments excitatory amino acid transmission in the nucleus accumbens only in rats having developed behavioral sensitization. *Journal of Neuroscience*, *16*(4), 1550-1560.

Pontieri, F. E., Tanda, G., & Di Chiara, G. (1995). Intravenous cocaine, morphine, and amphetamine preferentially increase extracellular dopamine in the "shell" as compared with the "core" of the rat nucleus accumbens. *Proceedings of the National Academy of Sciences of the United States of America*, *92*(26), 12304-12308.

Porcella, A., Gessa, G. L., & Pani, L. (1998).  $\delta^9$ -tetrahydrocannabinol increases sequence-specific AP-1 DNA-binding activity and fos-related antigens in the rat brain. *European Journal of Neuroscience*, *10*(5), 1743-1751.

Pradhan, S. N., Bailey, P. T., & Ghosh, B. (1972). Some behavioral effects of  $\delta^9$ -tetrahydrocannabinol in rats. *Research Communications in Chemical Pathology & Pharmacology*, *3*(2), 197-204.

Pradhan, S. N., Bhattacharyya, A. K., Aulakh, C. S., Pradhan, S., & Bailey, P. T. (1978). Cannabis and brain-stimulation reward. *Advances in the Biosciences*, *22-23*, 567-583.

Prasad, B. M., Sorg, B. A., Ulibarri, C., & Kalivas, P. W. (1995). Sensitization to stress and psychostimulants. Involvement of dopamine transmission versus the HPA axis. *Annals of the New York Academy of Sciences*, *771*, 617-625.

Prasad, B. M., Ulibarri, C., Kalivas, P. W., & Sorg, B. A. (1996). Effect of adrenalectomy on the initiation and expression of cocaine-induced sensitization. *Psychopharmacology*, *125*(3), 265-273.

Prioreschi, P., & Babin, D. (1993). Ancient use of cannabis. *Nature*, *364*(6439), 680.

Pryor, G. T., Husain, S., Larsen, F., McKenzie, C. E., Carr, J. D., & Braude, M. C. (1977). Interactions between  $^9$ -tetrahydrocannabinol and phencyclidine hydrochloride in rats. *Pharmacology, Biochemistry & Behavior*, 6(1), 123-136.

Pryor, G. T., Larsen, F. F., Husain, S., & Braude, M. C. (1978). Interactions of  $^9$ -tetrahydrocannabinol with d-amphetamine, cocaine, and nicotine in rats. *Pharmacology, Biochemistry & Behavior*, 8(3), 295-318.

Reid, M. S., Ho, L. B., & Berger, S. P. (1996). Effects of environmental conditioning on the development of nicotine sensitization: behavioral and neurochemical analysis. *Psychopharmacology*, 126(4), 301-310.

Reilly, D., Didcott, P., Swift, W., & Hall, W. (1998). Long-term cannabis use: characteristics of users in an Australian rural area. *Addiction*, 93(6), 837-846.

Rex, A., Sondern, U., Voigt, J. P., Franck, S., & Fink, H. (1996). Strain differences in fear-motivated behavior of rats. *Pharmacology, Biochemistry & Behavior*, 54(1), 107-111.

Rinaldi-Carmona, M., Barth, F., Heaulme, M., Alonso, R., Shire, D., Congy, C., Soubrie, P., Breliere, J. C., & Le Fur, G. (1995). Biochemical and pharmacological characterisation of SR141716A, the first potent and selective brain cannabinoid receptor antagonist. *Life Sciences*, 56(23-24), 1941-1947.

Rinaldi-Carmona, M., Barth, F., Heaulme, M., Shire, D., Calandra, B., Congy, C., Martinez, S., Maruani, J., Neliat, G., & Caput, D. (1994). SR141716A, a potent and selective antagonist of the brain cannabinoid receptor. *FEBS Letters*, 350(2-3), 240-244.

Rivest, S., & Rivier, C. (1994). Stress and interleukin-1 beta-induced activation of *c-fos*, NGFI-B and CRF gene expression in the hypothalamic PVN: comparison between Sprague-Dawley, Fisher-344 and Lewis rats. *Journal of Neuroendocrinology*, 6(1), 101-117.

Rivet, J. M., Audinot, V., Gobert, A., Peglion, J. L., & Millan, M. J. (1994). Modulation of mesolimbic dopamine release by the selective dopamine D3 receptor antagonist, (+)-S 14297. *European Journal of Pharmacology*, 265(3), 175-177.

Rivet, J. M., Stinus, L., LeMoal, M., & Mormede, P. (1989). Behavioral sensitization to amphetamine is dependent on corticosteroid receptor activation. *Brain Research*, 498(1), 149-153.

Robbins, S. J., Ehrman, R. N., Childress, A. R., Cornish, J. W., & O'Brien, C. P. (2000). Mood state and recent cocaine use are not associated with levels of cocaine cue reactivity. *Drug & Alcohol Dependence*, 59(1), 33-42.

Robbins, S. J., Ehrman, R. N., Childress, A. R., & O'Brien, C. P. (1999a). Comparing levels of cocaine cue reactivity in male and female outpatients. *Drug & Alcohol Dependence*, 53(3), 223-230.

Robbins, T. W., & Everitt, B. J. (1999b). Drug addiction: bad habits add up. *Nature*, 398(6728), 567-570.

- Roberts, D. C. S., & Andrews, M. M. (1997). Baclofen suppression of cocaine self-administration - demonstration using a discrete trials procedure. *Psychopharmacology*, *131*(3), 271-277.
- Robinson, S. E., Kunko, P. M., Smith, J. A., Wallace, M. J., Mo, Q., & Maher, J. R. (1997). Extracellular aspartate concentration increases in nucleus accumbens after cocaine sensitization. *European Journal of Pharmacology*, *319*(1), 31-36.
- Robinson, T. E., & Berridge, K. C. (1993). The neural basis of drug craving: an incentive-sensitization theory of addiction. *Brain Research - Brain Research Reviews*, *18*(3), 247-291.
- Rodgers, R. J. (1997). Animal models of 'anxiety': where next? *Behavioural Pharmacology*, *8*(6-7), 477-496; discussion 497-504.
- Rodriguez de Fonseca, F., Carrera, R. A., Navarro, M., Koob, G. F., & Weiss, F. (1997). Activation of corticotropin-releasing factor in the limbic system during cannabinoid withdrawal. *Science*, *276*, 2050-2054.
- Rodriguez de Fonseca, F., Rubio, P., Menzaghi, F., Merlo-Pich, E., Rivier, J., Koob, G. F., & Navarro, M. (1996). Corticotropin-releasing factor (CRF) antagonist [D-Phe<sup>12</sup>,Nle<sup>21,38</sup>,C alpha MeLeu<sup>37</sup>]CRF attenuates the acute actions of the highly potent cannabinoid receptor agonist HU-210 on defensive-withdrawal behavior in rats. *Journal of Pharmacology & Experimental Therapeutics*, *276*(1), 56-64.
- Rodriguez de Fonseca, F. R., Fernandez-Ruiz, J. J., Murphy, L., Eldridge, J. C., Steger, R. W., & Bartke, A. (1991). Effects of <sup>9</sup>-tetrahydrocannabinol exposure on adrenal medullary function: evidence of an acute effect and development of tolerance in chronic treatments. *Pharmacology, Biochemistry & Behavior*, *40*(3), 593-598.
- Rogério, R., & Takahashi, R. N. (1992). Anxiogenic properties of cocaine in the rat evaluated with the elevated plus-maze. *Pharmacology, Biochemistry & Behavior*, *43*(2), 631-633.
- Rohr, J. M., Skowlund, S. W., & Martin, T. E. (1989). Withdrawal sequelae to cannabis use. *International Journal of the Addictions*, *24*(7), 627-631.
- Rosen, J. B., & Schulkin, J. (1998). From normal fear to pathological anxiety. *Psychological Review*, *105*(2), 325-350.
- Rosenkrantz, H., Sprague, R. A., Fleischman, R. W., & Braude, C. (1975). Oral <sup>9</sup>-tetrahydrocannabinol toxicity in rats treated for periods up to six months. *Toxicology & Applied Pharmacology*, *32*(2), 399-417.
- Rouge-Pont, F., Deroche, V., Le Moal, M., & Piazza, P. V. (1998). Individual differences in stress-induced dopamine release in the nucleus accumbens are influenced by corticosterone. *European Journal of Neuroscience*, *10*(12), 3903-3907.
- Rounsaville, B. J., Bryant, K., Babor, T., Kranzler, H., & Kadden, R. (1993). Cross system agreement for substance use disorders: DSM-III-R, DSM-IV and ICD-10. *Addiction*, *88*(3), 337-348.

Rowan, M. J., Cullen, W. K., & Moulton, B. (1990). Buspirone impairment of performance of passive avoidance and spatial learning tasks in the rat. *Psychopharmacology*, *100*(3), 393-398.

Rowlett, J. K., Mattingly, B. A., & Bardo, M. T. (1995). Repeated quinpirole treatment: locomotor activity, dopamine synthesis, and effects of selective dopamine antagonists. *Synapse*, *20*(3), 209-216.

Rubino, T., Massi, P., Patrini, G., Venier, I., Giagnoni, G., & Parolaro, D. (1994). Chronic CP-55,940 alters cannabinoid receptor mRNA in the rat brain: an in situ hybridization study. *Neuroreport*, *5*(18), 2493-2496.

Rubino, T., Patrini, G., Massi, P., Fuzio, D., Vigano, D., Giagnoni, G., & Parolaro, D. (1998). Cannabinoid-precipitated withdrawal: a time-course study of the behavioral aspect and its correlation with cannabinoid receptors and G protein expression. *Journal of Pharmacology & Experimental Therapeutics*, *285*(2), 813-819.

Sakaguchi, T., Bray, G. A., & Eddlestone, G. (1988). Sympathetic activity following paraventricular or ventromedial hypothalamic lesions in rats. *Brain Research Bulletin*, *20*(4), 461-465.

Salamone, J. D., Cousins, M. S., & Snyder, B. J. (1998). Behavioral functions of nucleus accumbens dopamine: empirical and conceptual problems with the anhedonia hypothesis. *Neuroscience and Biobehavioral Reviews*, *21*, 341-359.

Sandberg, R., Yasuda, R., Pankratz, D. G., Carter, T. A., Del Rio, J. A., Wodicka, L., Mayford, M., Lockhart, D. J., & Barlow, C. (2000). Regional and strain-specific gene expression mapping in the adult mouse brain. *PNAS*, *97*(20), 11038-11043.

Sanudo-Pena, M. C., Tsou, K., Delay, E. R., Hohman, A. G., Force, M., & Walker, J. M. (1997). Endogenous cannabinoids as an aversive or counter-rewarding system in the rat. *Neuroscience Letters*, *223*(2), 125-128.

Sautel, F., Griffon, N., Sokoloff, P., Schwartz, J. C., Launay, C., Simon, P., Costentin, J., Schoenfelder, A., Garrido, F., & Mann, A. (1995). Nafadotride, a potent preferential dopamine D<sub>3</sub> receptor antagonist, activates locomotion in rodents. *Journal of Pharmacology & Experimental Therapeutics*, *275*(3), 1239-1246.

Scammell, T. E., Price, K. J., & Sagar, S. M. (1993). Hyperthermia induces *c-fos* expression in the preoptic area. *Brain Research*, *618*(2), 303-307.

Schulteis, G., Markou, A., Cole, M., & Koob, G. F. (1995). Decreased brain reward produced by ethanol withdrawal. *Proceedings of the National Academy of Sciences of the United States of America*, *92*(13), 5880-5884.

Schulteis, G., Markou, A., Gold, L. H., Stinus, L., & Koob, G. F. (1994). Relative sensitivity to naloxone of multiple indices of opiate withdrawal: a quantitative dose-response analysis. *Journal of Pharmacology & Experimental Therapeutics*, *271*(3), 1391-1398.

- Schultes, R. E. (1969). Hallucinogens of plant origin. *Science*, 163(864), 245-254.
- Schultes, R. E., & Hofmann, A. (1992). *Plants of the gods: their sacred healing, hallucinogenic powers.*: Healing Arts Press.
- Schultz, W. (1998). Predictive reward signal of dopamine neurons. *Journal of Neurophysiology*, 80, 1-27.
- Science and Technology Committee (1998). *Cannabis: The Scientific and Medical Evidence*. London: House of Lords.
- Self, D. W., & Stein, L. (1992). Receptor subtypes in opioid and stimulant reward. *Pharmacology & Toxicology*, 70(2), 87-94.
- Self, D. W., Terwilliger, R. Z., Nestler, E. J., & Stein, L. (1994). Inactivation of Gi and G(o) proteins in nucleus accumbens reduces both cocaine and heroin reinforcement. *Journal of Neuroscience*, 14(10), 6239-6247.
- Seutin, V., Verbanck, P., Massotte, L., & Dresse, A. (1991). Acute amphetamine-induced subsensitivity of A10 dopamine autoreceptors in vitro. *Brain Research*, 558(1), 141-144.
- Shen, M., Piser, T. M., Seybold, V. S., & Thayer, S. A. (1996). Cannabinoid receptor agonists inhibit glutamatergic synaptic transmission in rat hippocampal cultures. *Journal of Neuroscience*, 16(14), 4322-4334.
- Shen, M., & Thayer, S. A. (1999).  $\Delta^9$ -tetrahydrocannabinol acts as a partial agonist to modulate glutamatergic synaptic transmission between rat hippocampal neurons in culture. *Molecular Pharmacology*, 55(1), 8-13.
- Shepherd, J. K., Blanchard, D. C., Weiss, S. M., Rodgers, R. J., & Blanchard, R. J. (1992). Morphine attenuates antipredator ultrasonic vocalizations in mixed-sex rat colonies. *Pharmacology, Biochemistry & Behavior*, 41(3), 551-558.
- Shire, D., Carillon, C., Kaghad, M., Calandra, B., Rinaldi-carmona, M., Le Fur, G., Caput, D., & Ferrara, P. (1995). An amino-terminal variant of the central cannabinoid receptor resulting from alternative splicing. *Journal of Biological Chemistry*, 270(8), 3726-3731.
- Shoib, M., Benwell, M. E., Akbar, M. T., Stolerman, I. P., & Balfour, D. J. (1994). Behavioural and neurochemical adaptations to nicotine in rats: influence of NMDA antagonists. *British Journal of Pharmacology*, 111(4), 1073-1080.
- Shurin, M. R., Kusnecov, A. W., Riechman, S. E., & Rabin, B. S. (1995). Effect of a conditioned aversive stimulus on the immune response in three strains of rats. *Psychoneuroendocrinology*, 20(8), 837-849.
- Sieber, B. (1982). Influence of hashish extract on the social behaviour of encountering male baboons (*Papio c. anubis*). *Pharmacology, Biochemistry & Behavior*, 17(2), 209-216.

- Siemens, A. J., & Doyle, O. L. (1979). Cross-tolerance between  $\Delta^9$ -tetrahydrocannabinol and ethanol: the role of drug disposition. *Pharmacology, Biochemistry & Behavior*, *10*(1), 49-55.
- Simar, M. R., Saphier, D., & Goeders, N. E. (1996). Differential neuroendocrine and behavioral responses to cocaine in Lewis and Fischer rats. *Neuroendocrinology*, *63*(1), 93-100.
- Smith, G. W., Aubry, J. M., Dellu, F., Contarino, A., Bilezikjian, L. M., Gold, L. H., Chen, R., Marchuk, Y., Hauser, C., Bentley, C. A., Sawchenko, P. E., Koob, G. F., Vale, W., & Lee, K. F. (1998). Corticotropin releasing factor receptor 1-deficient mice display decreased anxiety, impaired stress response, and aberrant neuroendocrine development. *Neuron*, *20*(6), 1093-1102.
- Smith, J. E., Jansen, A. S., Gilbey, M. P., & Loewy, A. D. (1998). CNS cell groups projecting to sympathetic outflow of tail artery: neural circuits involved in heat loss in the rat. *Brain Research*, *786*(1-2), 153-164.
- Solowij, N. (1995). Do cognitive impairments recover following cessation of cannabis use. *Life Sciences*, *56*(23-24), 2119-2126.
- Solowij, N., Michie, P. T., & Fox, A. M. (1995). Differential impairments of selective attention due to frequency and duration of cannabis use. *Biological Psychiatry*, *37*(10), 731-739.
- Sorg, B. A., & Ulibarri, C. (1995). Application of a protein synthesis inhibitor into the ventral tegmental area, but not the nucleus accumbens, prevents behavioral sensitization to cocaine. *Synapse*, *20*(3), 217-224.
- Stark, P., & Dews, P. B. (1980). Cannabinoids. I. Behavioral effects. *Journal of Pharmacology & Experimental Therapeutics*, *214*(1), 124-130.
- Stella, N., Schweitzer, P., & Piomelli, D. (1997). A second endogenous cannabinoid that modulates long-term potentiation. *Nature*, *388*(6644), 773-778.
- Stephens, R. S., Roffman, R. A., & Simpson, E. E. (1993). Adult marijuana users seeking treatment. *Journal of Consulting & Clinical Psychology*, *61*(6), 1100-1104.
- Stephens, R. S., Roffman, R. A., & Simpson, E. E. (1994). Treating adult marijuana dependence: a test of the relapse prevention model. *Journal of Consulting & Clinical Psychology*, *62*(1), 92-99.
- Stephenson, C. P., Hunt, G. E., Topples, A. N., & McGregor, I. S. (1999). The distribution of 3,4-methylenedioxymethamphetamine "Ecstasy"-induced *c-fos* expression in rat brain. *Neuroscience*, *92*(3), 1011-1023.
- Sternberg, E. M., Hill, J. M., Chrousos, G. P., Kamilaris, T., Listwak, S. J., Gold, P. W., & Wilder, R. L. (1989a). Inflammatory mediator-induced hypothalamic-pituitary-adrenal axis activation is defective in streptococcal cell wall arthritis-susceptible Lewis rats. *Proceedings of the National Academy of Sciences of the United States of America*, *86*(7), 2374-2378.



- Sternberg, E. M., Young, W. S., Bernardini, R., Calogero, A. E., Chrousos, G. P., Gold, P. W., & Wilder, R. L. (1989b). A central nervous system defect in biosynthesis of corticotropin-releasing hormone is associated with susceptibility to streptococcal cell wall-induced arthritis in Lewis rats. *Proceedings of the National Academy of Sciences of the United States of America*, *86*(12), 4771-4775.
- Stewart, J., & Badiani, A. (1993). Tolerance and sensitization to the behavioral effects of drugs. *Behavioural Pharmacology*, *4*, 289-312.
- Strecker, R. E., Eberle, W. F., & Ashby, C. R., Jr. (1995). Extracellular dopamine and its metabolites in the nucleus accumbens of Fischer and Lewis rats: basal levels and cocaine-induced changes. *Life Sciences*, *56*(6), L135-141.
- Sugiura, T., Kondo, S., Sukagawa, A., Nakane, S., Shinoda, A., Itoh, K., Yamashita, A., & Waku, K. (1995). 2-Arachidonoylglycerol: a possible endogenous cannabinoid receptor ligand in brain. *Biochemical & Biophysical Research Communications*, *215*(1), 89-97.
- Suzuki, T., George, F. R., & Meisch, R. A. (1988a). Differential establishment and maintenance of oral ethanol reinforced behavior in Lewis and Fischer 344 inbred rat strains. *Journal of Pharmacology & Experimental Therapeutics*, *245*(1), 164-170.
- Suzuki, T., Otani, K., Koike, Y., & Misawa, M. (1988b). Genetic differences in preferences for morphine and codeine in Lewis and Fischer 344 inbred rat strains. *Japanese Journal of Pharmacology*, *47*(4), 425-431.
- Swanson, L. W., & Petrovich, G. D. (1998). What is the amygdala? *Trends in Neurosciences*, *21*(8), 323-331.
- Swift, W., Copeland, J., & Hall, W. (1998). Choosing a diagnostic cut-off for cannabis dependence. *Addiction*, *93*(11), 1681-1692.
- Swift, W., Hall, W., & Copeland, J. (1997). *Pattern and correlates of cannabis dependence among long term users in Sydney, Australia*. Sydney: NDARC Technical Monograph.
- Swift, W., Hall, W., Didcott, P., & Reilly, D. (1998). Patterns and correlates of cannabis dependence among long-term users in an Australian rural area. *Addiction*, *93*(8), 1149-1160.
- Szabo, B., Dorner, L., Pfreundtner, C., Norenberg, W., & Starke, K. (1998). Inhibition of GABAergic inhibitory postsynaptic currents by cannabinoids in rat corpus striatum. *Neuroscience*, *85*(2), 395-403.
- Szabo, B., Wallmichrath, I., Mathonia, P., & Pfreundtner, C. (2000). Cannabinoids inhibit excitatory neurotransmission in the substantia nigra pars reticulata. *Neuroscience*, *97*(1), 89-97.
- Takahashi, H., Takada, Y., Nagai, N., Urano, T., & Takada, A. (1998). Effects of nicotine and footshock stress on dopamine release in the striatum and nucleus accumbens. *Brain Research Bulletin*, *45*(2), 157-162.

- Takahashi, R. N., & Singer, G. (1979). Self-administration of  $\Delta^9$ -tetrahydrocannabinol by rats. *Pharmacology, Biochemistry & Behavior*, *11*(6), 737-740.
- Takahashi, R. N., & Singer, G. (1980). Effect of body weight levels on cannabis self-injection. *Pharmacology, Biochemistry and Behavior*, *13*, 877-881.
- Takahashi, R. N., & Singer, G. (1981). Cross self-administration of  $\Delta^9$ -tetrahydrocannabinol and D-amphetamine in rats. *Brazilian Journal of Medical & Biological Research*, *14*(6), 395-400.
- Tanda, G., Loddo, P., & Di Chiara, G. (1999). Dependence of mesolimbic dopamine transmission on  $\Delta^9$ -tetrahydrocannabinol. *European Journal of Pharmacology*, *376*(1-2), 23-26.
- Tanda, G., Pontieri, F. E., & DI Chiara, G. (1997). Cannabinoid and heroin activation of mesolimbic dopamine transmission by a common  $\mu_1$  opioid receptor mechanism. *Science*, *276*, 2048-2050.
- Terranova, J. P., Storme, J. J., Lafon, N., Perio, A., Rinaldi-Carmona, M., Le Fur, G., & Soubrie, P. (1996). Improvement of memory in rodents by the selective CB<sub>1</sub> cannabinoid receptor antagonist, SR 141716. *Psychopharmacology*, *126*, 165-172.
- Thomas, H. (1996). A community survey of adverse effects of cannabis use. *Drug & Alcohol Dependence*, *42*(3), 201-207.
- Thomas, H. U. W. (1993). Psychiatric symptoms in cannabis users. *British Journal of Psychiatry*, *163*, 141-149.
- Timpl, P., Spanagel, R., Sillaber, I., Kresse, A., Reul, J. M., Stalla, G. K., Blanquet, V., Steckler, T., Holsboer, F., & Wurst, W. (1998). Impaired stress response and reduced anxiety in mice lacking a functional corticotropin-releasing hormone receptor. *Nature Genetics*, *19*(2), 162-166.
- TPJ (1999). Phase 1 cannabis trial completed. *The Pharmaceutical Journal*, *263*, 811.
- Travis, K. A., & Johnson, A. K. (1993). In vitro sensitivity of median preoptic neurons to angiotensin II, osmotic pressure, and temperature. *American Journal of Physiology*, *264*(6 Pt 2), R1200-1205.
- Triarhou, L. C., Zhang, W., & Lee, W. H. (1996). Amelioration of the behavioral phenotype in genetically ataxic mice through bilateral intracerebellar grafting of fetal Purkinje cells. *Cell Transplantation*, *5*(2), 269-277.
- Tsou, K., Brown, S., Sanudo-Pena, C., Mackie, K., & Walker, J. M. (1998). Immunohistochemical distribution of cannabinoid CB<sub>1</sub> receptors in the rat central nervous system. *Neuroscience*, *83*(2).
- Tsou, K., Patrick, S. L., & Walker, J. M. (1995). Physical withdrawal in rats tolerant to  $\Delta^9$ -tetrahydrocannabinol precipitated by a cannabinoid receptor antagonist. *European Journal of Pharmacology*, *280*(3), R13-R15.

- Twitchell, W., Brown, S., & Mackie, K. (1997). Cannabinoids inhibit N- and P/Q-type calcium channels in cultured rat hippocampal neurons. *Journal of Neurophysiology*, 78(1), 43-50.
- Valjent, E., & Maldonado, R. (2000). A behavioural model to reveal place preference to  $\Delta^9$ -tetrahydrocannabinol in mice. *Psychopharmacology*, 147(4), 436-438.
- Van den Buuse, M. (1995). Differential effects of quinelorane and pergolide on behaviour, blood pressure, and body temperature of spontaneously hypertensive rats and Wistar-Kyoto rats. *Pharmacology, Biochemistry & Behavior*, 50(3), 389-397.
- Van der Poel, A. M., Noach, E. J., & Miczek, K. A. (1989). Temporal patterning of ultrasonic distress calls in the adult rat: effects of morphine and benzodiazepines. *Psychopharmacology*, 97(2), 147-148.
- Van Ree, J. M., Niesink, R. J., & Nir, I. (1984).  $\Delta^1$ -Tetrahydrocannabinol but not cannabidiol reduces contact and aggressive behavior of rats tested in dyadic encounters. *Psychopharmacology*, 84(4), 561-565.
- Vanderschuren, L. J., Schoffelmeer, A. N., Mulder, A. H., & De Vries, T. J. (1999). Dopaminergic mechanisms mediating the long-term expression of locomotor sensitization following pre-exposure to morphine or amphetamine. *Psychopharmacology*, 143(3), 244-253.
- Vanderschuren, L. J., Tjon, G. H., Nestby, P., Mulder, A. H., Schoffelmeer, A. N., & De Vries, T. J. (1997). Morphine-induced long-term sensitization to the locomotor effects of morphine and amphetamine depends on the temporal pattern of the pretreatment regimen. *Psychopharmacology*, 131(2), 115-122.
- Vasquez, C., & Lewis, D. L. (1999). The CB<sub>1</sub> cannabinoid receptor can sequester G-proteins, making them unavailable to couple to other receptors. *Journal of Neuroscience*, 19(21), 9271-9280.
- Vaughan, C. W., Connor, M., Bagley, E. E., & Christie, M. J. (2000). Actions of cannabinoids on membrane properties and synaptic transmission in rat periaqueductal gray neurons in vitro. *Molecular Pharmacology*, 57(2), 288-295.
- Vaughan, C. W., McGregor, I. S., & Christie, M. J. (1999). Cannabinoid receptor activation inhibits GABAergic neurotransmission in rostral ventromedial medulla neurons in vitro. *British Journal of Pharmacology*, 127(4), 935-940.
- Vezina, P., Giovino, A. A., Wise, R. A., & Stewart, J. (1989). Environment-specific cross-sensitization between the locomotor activating effects of morphine and amphetamine. *Pharmacology, Biochemistry & Behavior*, 32(2), 581-584.
- Vezina, P., & Stewart, J. (1990). Amphetamine administered to the ventral tegmental area but not to the nucleus accumbens sensitizes rats to systemic morphine: lack of conditioned effects. *Brain Research*, 516(1), 99-106.
- Vivian, J. A., Kishioka, S., Butelman, E. R., Broadbear, J., Lee, K. O., & Woods, J. H. (1998). Analgesic, respiratory and heart rate effects of cannabinoid and

opioid agonists in rhesus monkeys: antagonist effects of SR 141716A. *Journal of Pharmacology & Experimental Therapeutics*, 286(2), 697-703.

Vivian, J. A., & Miczek, K. A. (1999). Interactions between social stress and morphine in the periaqueductal gray: effects on affective vocal and reflexive pain responses in rats. *Psychopharmacology*, 146(2), 153-161.

Volkow, N. D., Gillespie, H., Mullani, N., Tancredi, L., Grant, C., Valentine, A., & Hollister, L. (1996). Brain Glucose Metabolism In Chronic Marijuana Users At Baseline and During Marijuana Intoxication. *Psychiatry Research: Neuroimaging*, 67(1), 29-38.

Walker, J. M., Hohmann, A. G., Martin, W. J., Strangman, N. M., Huang, S. M., & Tsou, K. (1999). The neurobiology of cannabinoid analgesia. *Life Sciences*, 65(6-7), 665-673.

Watkins, S. S., Stinus, L., Koob, G. F., & Markou, A. (2000). Reward and somatic changes during precipitated nicotine withdrawal in rats: centrally and peripherally mediated effects. *Journal of Pharmacology & Experimental Therapeutics*, 292(3), 1053-1064.

Weidenfeld, J., Feldman, S., & Mechoulam, R. (1994). Effect of the brain constituent anandamide, a cannabinoid receptor agonist, on the hypothalamo-pituitary-adrenal axis in the rat. *Neuroendocrinology*, 59(2), 110-112.

Weil, A. T., Zinberg, N. E., & Nelsen, J. M. (1968). Clinical psychological effects of marijuana in man. *Science*, 162, 1234-1242.

Wenger, T., Jamali, K. A., Juaneda, C., Leonardelli, J., & Tramu, G. (1997). Arachidonyl ethanolamide (anandamide) activates the parvocellular part of hypothalamic paraventricular nucleus. *Biochemical & Biophysical Research Communications*, 237(3), 724-728.

Westlake, T. M., Howlett, A. C., Bonner, T. I., Matsuda, L. A., & Herkenham, M. (1994). Cannabinoid receptor binding and messenger RNA expression in human brain: an in vitro receptor autoradiography and in situ hybridization histochemistry study of normal aged and Alzheimer's brains. *Neuroscience*, 63(3), 637-652.

White, F. J., Hu, X. T., Zhang, X. F., & Wolf, M. E. (1995). Repeated administration of cocaine or amphetamine alters neuronal responses to glutamate in the mesoaccumbens dopamine system. *Journal of Pharmacology & Experimental Therapeutics*, 273(1), 445-454.

Wickelgren, I. (1997). Marijuana: harder than thought? *Science*, 276, 1957-1958.

Wickens, A. P., & Pertwee, R. G. (1993).  $\Delta^9$ -tetrahydrocannabinol and anandamide enhances the ability of muscimol to induce catalepsy in the globus pallidus of rats. *European Journal of Pharmacology*, 250, 205-208.

- Wiesbeck, G. A., Schuckit, M. A., Kalmijn, J. A., Tipp, J. E., Bucholz, K. K., & Smith, T. L. (1996). An evaluation of the history of a marijuana withdrawal syndrome in a large population. *Addiction, 91*(10), 1469-1478.
- Wiley, J. L., Barrett, R. L., Lowe, J., Balster, R. L., & Martin, B. R. (1995). Discriminative stimulus effects of CP 55,940 and structurally dissimilar cannabinoids in rats. *Neuropharmacology, 34*(6), 669-676.
- Williamson, S., Gossop, M., Powis, B., Griffiths, P., Fountain, J., & Strang, J. (1997). Adverse effects of stimulant drugs in a community sample of drug users. *Drug & Alcohol Dependence, 44*(2-3), 87-94.
- Williamson, S., Gossop, M., Powis, B., Griffiths, P., Fountain, J., & Strang, J. (1997). Adverse effects of stimulant drugs in a community sample of drug users. *Drug & Alcohol Dependence, 44*(2-3), 87-94.
- Winn, P., Brown, V. J., & Inglis, W. L. (1997). On the relationships between the striatum and the pedunculopontine tegmental nucleus. *Critical Reviews in Neurobiology, 11*(4), 241-261.
- Wise, R. A. (1996). Addictive drugs and brain stimulation reward. *Annual Reviews in Neuroscience, 19*, 319-340.
- Wise, R. A., & Bozarth, M. A. (1987). A psychomotor stimulant theory of addiction. *Psychological Review, 94*(4), 469-492.
- Wise, R. A., & Munn, E. (1995). Withdrawal from chronic amphetamine elevates baseline intracranial self-stimulation thresholds. *Psychopharmacology, 117*(2), 130-136.
- Wise, R. A., & Rompre, P. P. (1989). Brain dopamine and reward. *Annual Review of Psychology, 40*, 191-225.
- Wolf, M. E. (1998). The role of excitatory amino acids in behavioral sensitization to psychomotor stimulants. *Progress in Neurobiology, 54*(6), 679-720.
- Wolf, M. E., & Jeziorski, M. (1993). Coadministration of MK-801 with amphetamine, cocaine or morphine prevents rather than transiently masks the development of behavioral sensitization. *Brain Research, 613*(2), 291-294.
- Woody, G. E., Cottler, L. B., & Cacciola, J. (1993). Severity of dependence: data from the DSM-IV field trials. *Addiction, 88*(11), 1573-1579.
- Wren, C. S. (1997). Phantom number haunt the war on drugs. *New York Times, April 20th*, 4E.
- Wu, Y. L., Yoshida, M., Emoto, H., & Tanaka, M. (1999). Psychological stress selectively increases extracellular dopamine in the 'shell', but not in the 'core' of the rat nucleus accumbens: a novel dual-needle probe simultaneous microdialysis study. *Neuroscience Letters, 275*(1), 69-72.
- Yamada, M., Cho, T., Coleman, N. J., & Richelson, E. (1995). Regulation of daily rhythm of body temperature by neurotensin receptor in rats. *Research Communications in Molecular Pathology & Pharmacology, 87*(3), 323-332.

Yang, X. M., Gorman, A. L., Dunn, A. J., & Goeders, N. E. (1992). Anxiogenic effects of acute and chronic cocaine administration: neurochemical and behavioral studies. *Pharmacology, Biochemistry & Behavior*, *41*(3), 643-650.

Young, A. M., Katz, J. L., & Woods, J. H. (1981). Behavioral effects of levonantradol and nantradol in the rhesus monkey. *Journal of Clinical Pharmacology*, *21*, 348S-360S.

Young, S. T., Porrino, L. J., & Iadarola, M. J. (1991). Cocaine induces striatal *c-fos*-immunoreactive proteins via dopaminergic D<sub>1</sub> receptors. *Proceedings of the National Academy of Sciences of the United States of America*, *88*(4), 1291-1295.

Zangrossi, H., Jr., & File, S. E. (1992). Chlordiazepoxide reduces the generalised anxiety, but not the direct responses, of rats exposed to cat odor. *Pharmacology, Biochemistry & Behavior*, *43*(4), 1195-1200.

Zangrossi, H., Jr., & File, S. E. (1994). Habituation and generalization of phobic responses to cat odor. *Brain Research Bulletin*, *33*(2), 189-194.

Zhu, B., & Herbert, J. (1996). Behavioural, autonomic and endocrine responses associated with *c-fos* expression in the forebrain and brainstem after intracerebroventricular infusions of endothelins. *Neuroscience*, *71*(4), 1049-1062.

Zias, J., Stark, H., Sellgman, J., Levy, R., Werker, E., Breuer, A., & Mechoulam, R. (1993). Early medical use of cannabis. *Nature*, *363*(6426), 215.

Zimmer, L., & Morgan, J. P. (1997). *Marijuana myths, marijuana facts: a review of the scientific evidence*. New York: The Lindesmith Center.

Zuardi, A. W., Shirakawa, I., Finkelford, E., & Karniol, I. G. (1982). Action of cannabinalol on the anxiety and other effects produced by <sup>9</sup>-THC in normal subjects. *Psychopharmacology*, *76*, 245-250.