

*“Quants cops un home ha  
començat una nova etapa de la  
seva vida a partir de la lectura  
d’un llibre”  
Henry David Thoreau*

**VII. BIBLIOGRAFIA**

Adams RD, Víctor M, Ropper AH (1997). Principios de neurología. McGraw-Hill. Interamericana. México. Cap. 43. Trastornos del sistema nervioso causados por fármacos y otros agentes químicos, pp 1025-1056.

Agency for Toxic Substances and Disease Registry (September, 2000). Toxicological Profile For Manganese. USA.

Al'Absi M, Bongard S, Lovallo WR (2000). Adrenocorticotropin responses to interpersonal stress: effects of overt anger expression style and defensiveness. *Int J Psychophysiol* 37: 257-265.

Alario P, Gamallo A, Beato MJ, Trancho G (1987). Body weight gain, food intake and adrenal development in chronic noise stressed rats. *Physiol Behav* 40: 29-32.

Alessio L, Apostoli P, Feerioli A, Lombardi S (1989). Interference of manganese on neuroendocrinal system in exposed workers. Preliminary report. *Biol Trace Elem Res* 21: 249-253.

Ali MM, Murthy RC, Saxena DK, Chandra SV (1983). Effect of low protein diet on manganese neurotoxicity. II. Brain GABA and seizure susceptibility. *Neurobehav Toxicol Teratol* 5: 385-389.

Almaguer-Melián W, Jas-Garcia J, Francis-Turner L, Antúnez-Potashkina I, Bergado-Rosado JA (1999). Estudio comparativo de la lesión de fibra-fórnix por aspiración y transección. *Rev Neurología* 29: 704-709.

Alonso SJ, Damas C, Navarro E (2000). Behavioral despair in mice after prenatal stress. *J Physiol Biochem* 56: 77-82.

Altman J, Sudarshan K (1975). Postnatal development of locomotion in the laboratory rat. *Anim Behav* 23: 896-920.

Anderson DK, Rhees RW, Fleming DE (1985). Effects of prenatal stress on differentiation of the sexually dimorphic nucleus of the preoptic area 8SDN-POA of the rat brain. *Brain Res* 332: 113-118.

Aposhian HV, Ingersoll RT, Montgomery EB Jr (1999). Transport and control of manganese ions in the central nervous system. *Environ Res* 80: 96-98.

Armario A, Ortiz R, Balasch J (1984). Effect of crowding on some physiological and behavioral variables in adult male rats. *Physiol Behav* 32: 35-39.

Aschner M (2000a). Neuron-astrocyte interactions: implications for cellular energetics and antioxidant levels. *Neurotoxicology* 21: 1101-1108.

Aschner M (2000b). Manganese: brain transport and emerging research needs. *Environ Health Persp* 108 (suppl 3): 429-432.

Aschner M, Connor JR, Dorman DC, Malecki EA, Vrana KE (2001). Manganese in health and disease. En: *Handbook of Neurotoxicology* (vol 1). Massaro EJ (ed), Humana Press Inc., Totowa, NJ, cap 11, pp 195-210.

Aschner M, Gannon M (1994). Manganese (Mn) transport across the rat blood-barrier: saturable and transferrin-dependent transport mechanisms. *Brain Res Bull* 33: 345-349.

Aschner M, Kimelberg HK (1996). Astrocytes: potential modulators of heavy metal-induced neurotoxicity. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, cap 35, pp 587-608.

Barceloux DG (1999). Manganese. *J Toxicol Clin Toxicol* 37: 293-307.

Barlow SM, McElhatton PR, Sullivan FM (1975). The relation between maternal restraint and food deprivation, plasma corticosterone, and induction of cleft palate in the offspring of mice. *Teratology* 12: 97-104.

Barlow SM, Knight AF, Sullivan FM (1978). Delay in postnatal growth and development of offspring produced by maternal restraint stress during pregnancy in the rat. *Teratology* 18: 211-218.

Barrington WW, Angle CR, Willcockson NK, Padula MA, Korn T (1998). Autonomic function in manganese alloy workers. *Environ Res* 78: 50-58.

Bertók L (1998). Stress and nonspecific resistance. *Ann NY Acad Sci* 851: 1-2.

Beyer PE, Chernoff N (1986). The induction of supernumerary ribs in rodents. Role of maternal stress. *Terat Carci Mutagen* 6: 419-429.

Bignami G (1996). Economical test methods for developmental neurobehavioral toxicity. *Environ Health Persp* 104: 285-298.

Blazak WF, Brown GL, Gray TJB, Treinen KA, Denny KH (1996). Developmental toxicity study of mangafodipir trisodium injection (MnDPDP) in New Zealand white rabbits. *Fundam Appl Toxicol* 33: 11-15.

Bonilla E (1984). Chronic manganese intake induces changes in the motor activity of rats. *Exp Neurol* 84: 696-700.

Bosque MA (1991). Evaluación del potencial embriofetotóxico y de los efectos postnatales de los quelantes DMSA y DMPS, nuevos antidotos en intoxicaciones por metales. Tesis Doctoral, Universitat de Barcelona, Facultat de Medicina, Reus.

Bosque MA, Domingo JL, Corbella J (1994). Housing of pregnant rats in metabolism cages: maternal and developmental effects. *Exp Toxicol Pathol* 46: 303-306.

Bremner JD (1999). Does stress damage the brain? *Soc Biol Psychiatr* 45: 797-805.

Buendía J (1993). Estrés y depresión. En: *Estrés y Psicopatología*. Buendía J (ed), Ediciones Pirámide, Madrid, cap 6, pp 97-112.

Butterworth RF, Spahr L, Fontaine S, Layrargues GP (1995). Manganese toxicity, dopaminergic dysfunction and hepatic encephalopathy. *Metab Brain Dis* 10: 259-267.

Cahill L, McGaugh JL (1996). Modulation of memory storage. *Curr Opin Neurobiol* 6: 237-242.

Calabresi P, Ammassari-Teule M, Gubellini P, Sancesario G, Morello M, Centonze D, Marfia GA, Saulle E, Passino E, Picconi B, Bernardi G (2001). A synaptic mechanism underlying the behavioral abnormalities induced by manganese intoxication. *Neurobiol Dis* 8: 419-432.

Calne DB, Chu NS, Huang CC, Lu CS, Olanow W (1994). Manganism and idiopathic parkinsonism similarities and differences. *Neurology* 44: 1583-1586.

Cano G, Suárez-Roca H, Gómez G, Arcaya JL, Aversano C, Latán JC, Bonilla E (1996). Alterations of animal motor activity in early stages of experimental manganese poisoning. En: *Metal Ions in Biology and Medicine*, vol 4, pp 472-474.

Cardoso SE (1997). *Connections of the basal ganglia*. Accessible a [http://www.epub.org.br/cm/n04/fundamentos/connections\\_i.htm](http://www.epub.org.br/cm/n04/fundamentos/connections_i.htm) (Consulta 05-07-02).

Carl GF, Blackwell LK, Barnett FC, Thompson LA, Rissinger CJ, Olin KL, Critchfield JM, Keen CL, Gallagher BB (1993). Manganese and epilepsy: brain glutamine synthetase and liver arginase activities in genetically epilepsy prone and chronically seized rats. *Epilepsia* 34: 441-446.

Carson BL, Ellis III HV, McCann JL (1986). Toxicology and biological monitoring of metals in humans. Cap III. Metal Profiles. Lewis Publishers, Inc. Michigan. USA.

Centonze D, Gubellini P, Bernardi G, Calabresi P (2001). Impaired excitatory transmission in the striatum of rats chronically intoxicated with manganese. *Exp Neurol* 172: 469-476.

Chandra SV (1972). Histological and histochemical changes in experimental manganese encephalopathy in rabbits. *Arch Toxicol* 29: 29-38.

Chandra SV, Shukla GS, Murthy RC (1979). Effect of stress on the response of rat brain. *Toxicol Appl Pharm* 47: 603-608.

Chang LW (1996a). An introduction to neurotoxicology of metals. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 509-510.

Chang LW (1996b). Toxicology and neuropathology induced by metals. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 511-536.

Chantal H, Kabbay M, Maccari S (1994). Prenatal stress increases the hypothalamo-pituitary-adrenal axis. Respons in young and adult rats. *J Endocrinol* 6: 341-345.

Chernoff N, Miller DB, Rosen MB, Mattscheck CL (1988). Developmental effects of maternal stress in the CD-1 mouse induced by restraint on single days during the period of major organogenesis. *Toxicology* 51: 57-65.

Claudio L, Kwa WC, Russell AL, Walling D (2000). Testing methods for developmental neurotoxicology of environmental chemicals. *Toxicol Appl Pharm* 164: 1-14.

Coll-Andreu M, Martí-Nicolovius M, Morgado-Bernal I (1991). Facilitation of shuttle-box avoidance by the platform method: temporal effects. *Physiol Behav* 49: 1211-1215.

Coll-Andreu M, Martí-Nicolovius M, Portell-Cortés, Morgado-Bernal I (1993). Facilitation of shuttle-box avoidance by the platform method: effects of conditioned stimulus duration. *Physiol Behav* 53: 349-352.

Colomina MT, Albina ML, Domingo JL, Corbella J (1995). Effects of maternal stress on methylmercury-induced developmental toxicity in mice. *Physiol Behav* 58: 974-984.

Colomina MT, Albina ML, Domingo JL, Corbella J (1996a). Influence of maternal restraint stress on arsenic-induced pre- and postnatal alterations in mice. *Psychobiology* 24: 227-234.

Colomina MT, Albina ML, Domingo JL, Corbella J (1997). Influence of maternal stress on the effects of prenatal exposure to methylmercury and arsenic on postnatal development and behavior in mice: a preliminary evaluation. *Physiol Behav* 61: 455-459.

Colomina MT, Albina ML, Torrente M, Domingo JL (2000). Teratogenia en experimentación animal: interacción del estrés con tóxicos. *Monografías de la Facultad de Medicina y Ciencias de la Salud* 2: 121-123.

Colomina MT, Domingo JL, Llobet JM, Corbella J (1996b). Effect of day exposure on the developmental toxicity of manganese in mice. *Vet Hum Toxicol* 38: 7-9.

Colomina MT, Esparza JL, Corbella J, Domingo JL (1998). The effect of maternal restraint on developmental toxicity of aluminum in mice. *Neurotoxicol Teratol* 20: 651-656.

Colomina MT, Sánchez DJ, Sánchez-Turet M, Domingo JL (1999). Behavioral effects of aluminum in mice: influence of restraint stress. *Neuropsychology* 40: 142-149.

Corbella J (2000). *Esquemes de Toxicologia Industrial (I). Introducció metalls*. Studia Ramazziniana Mediterranea-IV, Seminaris Pere Mata, Barcelona.

Corbella J, Domingo JL (1996). Developmental and reproductive effects. En: Toxicology of Metals. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 1083-1096.

Cordero MI, Sandi C (1998). Estrés y función cognitiva: el papel de los glucocorticoides en procesos de aprendizaje y memoria. *Ansiedad y Estrés* 4: 51-58.

Costa-Miserachs D, Portell-Cortés I, Aldavert-Vera L, Torras-García M, Morgado-Bernal I (1993). Facilitation of a distributed shuttlebox conditioning with post-training epinephrine in rats. *Behav Neural Biol* 60: 75-78.

Costa-Miserachs D, Portell-Cortés I, Aldavert-Vera L, Torras-García M, Morgado-Bernal I (1994). Long-term memory facilitation in rats by post-training epinephrine. *Behav Neurosci* 108: 469-474.

Crossman AR, Neary D (2000). *Neuroanatomy. An illustrated colour text*. 2<sup>nd</sup> ed. Churchill Livingstone, London, UK.

Cuesta de Di Zio MC, Gómez G, Bonilla E, Suarez-Roca H (1995). Autoreceptor presynaptic control of dopamine release from striatum is lost at early stages of manganese poisoning. *Life Sci* 56: 1857-1864.

Curtis AL, Pavcovich AL, Grigoriadis DE, Valentino RJ (1995). Previous stress alters corticotropin releasing factor neurotransmission in the locus ceruleus. *Neuroscience* 65: 541-550.

Dahbhar FS, McEwen BS, Spencer RL (1996). Adaptation to prolonged or repeated stress-comparison between rat strains showing intrinsic differences in reactivity to acute stress. *Neuroendocrinology* 65: 360-368.

Dallman MF, Akana SF, Bradbur MJ, Strack AM, Hanson ES, Scribner KA (1994). Regulation of the hypothalamo pituitary adrenal axis during stress: feedback, facilitation and feeding. *Semin Neurosci* 6: 205-213.



Damon EG, Eidson AF, Hobbs CH, Hahn FF (1986). Effect of acclimation to caging on nephrotoxic response of rats to uranium. *Lab Anim Sci* 36: 24-27.

Darnaudäery M, Buäee L, Viltart O, Maccari S (2000). Chronic stress during pregnancy increases anxiety of female rats. *Abstr Soc Neurosci* 26: 488.

Davis JM (1998). Methylcyclopentadienyl manganese tricarbonyl: health risk uncertainties and research directions. *Environ Health Persp* 106: 191-201.

Davis JM (1999). Inhalation health risks of manganese: an EPA perspective. *Neurotoxicology* 20: 511-518.

Davis JM, Elias RW (1996). Risk assessment of metals. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 60-65.

Davis JM, Jarabek AM, Mage DT, Graham JA (1998). The EPA health risk assessment of methylcyclopentadienyl manganese tricarbonyl (MMT). *Risk Anal* 18: 57-70.

De Quervain D JF, Roozendaal B, McGaugh JL (1998). Stress and glucocorticoids impair retrieval of long-term spatial memory. *Nature* 394: 787-790.

De Quervain D JF, Roozendaal B, Nitsch RM, McGaugh JL, Hock C (2000). Acute cortisone administration impairs retrieval of long-term declarative memory in humans. *Nat Neurosci* 3: 313-314.

Del Corral P, Mahon AD, Duncan GE, Howe CA, Craig BW (1994). The effect of exercise on serum and salivary cortisol in male children. *Med Sci Sport Exer* 26: 1297-1301.

Deskin R, Bursian SJ, Edens FW (1981). The effect of chronic manganese administration on some neurochemical and physiological variables in neonatal rats. *Gen Pharmacol* 12: 279-280.

Dobbing J, Sands J (1971). Vulnerability of developing brain IX. The effect of nutritional growth retardation on the timing of the brain growth-spurt. *Biol Neonate* 19: 363-378.

Domingo JL (1994). Metal-induced developmental toxicity in mammals: a review. *J Toxicol Environ Health* 42: 123-141.

Domingo JL, Colomina MT, Corbella J (1995). Interacciones entre tóxicos: influencia del estrés materno sobre la toxicidad embriofetal de sustancias teratogénicas. *Rev R Acad Med Catalunya* 10: 67-76.

Domingo JL, Paternain JL, Ortega A, Corbella J (1988). Revisión de la terminología utilizada en publicaciones de teratología y toxicidad en el desarrollo. Una propuesta de presentación de resultados. *Rev Toxicología* 5: 101-108.

Dorman DC (2000). An integrative approach to neurotoxicology. *Toxicol Pathol* 28: 37-42.

Dorman DC, Struve MF, Vitarella D, Byerly FL, Goetz J, Miller R (2000). Neurotoxicity of manganese chloride in neonatal and adult CD rats following subchronic (21-day) high-dose oral exposure. *J Appl Toxicol* 20: 179-187.

Draski LJ, Burrig RG, Donovan PJ (1989). The influence of prenatal and/or postnatal exposure to lead on behavior of preweanling mice. *Physiol Behav* 45: 711-715.

Dreisbach RH, Robertson WO (1988). Manual de toxicología clínica. Prevención, diagnóstico y tratamiento. Cap 15. Envenenamiento por Metales. Manual Moderno. México, pp 220-221.

Durán E, Chacón JR (2001). Parkinsonismo probablemente inducido por manganeso. *Rev Neurol* 33: 434-436.

Eaton DL, Klaassen CD (1996). Principles of Toxicology. En: Casarett and Doull's Toxicology: the basic science of poisons, 5<sup>th</sup> ed. Klaassen CD (ed), McGraw-Hill, New York, pp 13-33.

Eder K, Kralik A, Kirchgessner M (1996). The effect of manganese supply on thyroid hormone metabolism in the offspring of manganese-depleted dams. *Biol Trace Elem Res* 55: 137-145.

Ely DR, Dapper V, Marasca J, Corrêa JB, Gamaro GD, Xavier MH, Michalowski MB, Catelli D, Rosat R, Ferreira MB, Dalmaz C (1997). Effect of restraint stress on feeding behavior of rats. *Physiol Behav* 61: 395-398.

Ericson JE, Rinderknecht A, Gonzalez EJ, Crinella FM, Kleinman MT (2001). Measurements of manganese with respect to calcium in histological enamel cross sections: toward a new manganese biomarker. *Environ Res* 86: 46-50.

Eriksson H, Magiste K, Plantin LO, Fonnum F, Hedstrom KG, Theodorsson-Norheim E, Kristensson K, Stalberg E, Heilbronn E (1987). Effects of manganese oxide on monkeys as revealed by a combined neurochemical, histological and neurophysiological evaluation. *Arch Toxicol* 61: 46-52.

Escorihuela RM, Tobeña A, Driscoll P, Fernández Teruel A (1995). Effects of training, early handling and perinatal flumazenil on shuttle box acquisition in roman low-avoidance rats: toward overcoming a genetic deficit. *Neurosci Behav R* 19: 353-367.

Fechter LD (1999). Distribution of manganese in development. *Neurotoxicology* 20: 197-201.

Feldman RG, Ratner MH, Feldman ES (1999). Approach to neurotoxicity tort cases. *Neurol Clin* 17: 267-281.

Ferm VH, Kilham L (1977). Synergistic teratogenic effects of arsenic and hyperthermia in hamsters. *Environ Res* 14: 483-486.

Fernandez J, Edo S (1998). ¿Se puede medir el estrés? Un análisis de los elementos que componen el proceso de estrés. *APCL* 16: 133-148.

Fox WM (1965). Reflex-ontogeny and behavioral development of the mouse. *Anim Behav* 13: 234-241.

Fride E, Dan Y, Feldon J, Halevy G, Weinstock M (1986). Effects of prenatal stress on vulnerability to stress in prepubertal and adult rats. *Physiol Behav* 37: 681-687.

Frumkin H, Solomon G (1997). Manganese in the U.S. supply. *Am J Ind Med* 31: 107-115.

Gamallo A, Villanua MA, Beato MJ (1986). Body weight gain and food intake alterations in crowd-reared rats. *Physiol Behav* 36: 835-837.

García A, Martí O, Vallès A, Dal-Zotto S, Armario A (2000). Recovery of the hypothalamic-pituitary-adrenal response to stress. *Neuroendocrinology* 72: 114-125.

Gerber GJ, O'Shaughnessy D (1986). Comparison of the behavioral effects of neurotoxic and systemically toxic agents: how discriminatory are behavioral tests of neurotoxicity? *Neurobehav Toxicol Teratol* 8: 703-710.

Gerhardsson L, Skerfving S (1996). Concepts on biological markers and biomonitoring for metal toxicity. En: *Toxicology of Metals*. Chang LW (ed), CRC Lewis Publishers, Boca Raton, FL, pp 81-110.

Gesi M, Riva A, Soldani P, Fornai F, Natale G, Lenzi P, Pellegrini A, Paparelli A (1999). Central and peripheral benzodiazepine ligands prevent mitochondrial damage induced by noise exposure in the rat myocardium: an ultrastructural study. *Anat Rec* 225: 334-341.

Gianutsos G, Morrow GR, Morris JB (1997). Accumulation of manganese in rat brain following intranasal administration. *Fund Appl Toxicol* 37: 102-105.

Gianutsos G, Murray MT (1982). Alterations in brain dopamine and GABA following inorganic or organic manganese administration. *Neurotoxicology* 3: 75-82.

Giasson BI, Lee VM-Y (2000). A new link between pesticides and Parkinson's disease. *Nat Neurosci* 3: 1227-1228.

Goldstein LE, Rasmusson AM, Bunney BS, Roth RH (1996). Role of the amygdala in the coordination of behavioral, neuroendocrine, and prefrontal cortical monoamine responses to psychological stress in the rat. *J Neurosci* 16: 4787-4798.

Golub MS, Han B, Keen CL (1991). Al and Mn: interactions in adult and developing mice. *Teratology* 43: 490.

Gómez M, Esparza JL, Domingo JL, Singh PK, Jones MM (1998). Aluminum distribution and excretion: a comparative study of a number of chelating agents in rats. *Pharmacol Toxicol* 82: 285-300.

Gottschalk LA, Rebello T, Buchsbaum MS, Tucker HG, Hodges EL (1991). Abnormalities in hair trace elements as indicators of aberrant behavior. *Compr Psychiat* 32: 229-237.

Grandin T (1997). Assessment of stress during handling and transport. *J Anim Sci* 75: 249-257.

Grant D, Ege T (1995). Teratogenicity in the rat after repeated intravenous injection of manganese, either as a complex (mangafodipir trisodium, MNDPDP), or as the inorganic chloride. *Toxicologist* 15: 160.

Grant D, Hustvedt SO (1998). Developmental toxicity of manganese chloride in the rat. *Neurotoxicology* 19: 469.

Gray LE Jr, Laskey JW (1980). Multivariate analysis of the effects of manganese on the reproductive physiology and behavior of the male mouse. *J Toxicol Environ Health* 6: 861-867.

Gunnar MR (1998). Quality of early care and buffering of neuroendocrine stress reactions: potential effects on the developing human brain. *Prev Med* 27: 208-211.

Gunnar MR, Barr RG (1998). Stress, early brain development, and behavior. *Infants Young Child* 11: 1-14.

Halatek T, Trzcinka-Ochocka M, Matczak W, Krajewska B, Wronska-Nofer T, Rydzynski K (2000). Studies on the relationship between occupational exposure to manganese and serum Clara cell protein levels in shipyard workers. *Trace Elem Electrolytes* 17: 48-53.

Hall CS (1934). Emotional behavior in the rat: I. Defecation and urination as measures of individual differences in emotionality. *J Comp Psychol* 18: 385-403.

Hargreaves KM (1990). Neuroendocrine markers of stress. *Anesth Prog* 37: 99-105.

Hass U, Lund SP, Simonson L, Fries AS (1995). Effects of prenatal exposure to xylene on postnatal development and behavior in rats. *Neurotoxicol Teratol* 17: 341-349.

Hayes AW (1989). *Principles and methods of toxicology*. 2ed. Hayes AW (ed), Raven Press, New York.

Henriksson J, Tallkvist J, Tjälve H (1999). Transport of manganese via the olfactory pathway in rats: dosage dependency of the uptake and subcellular distribution of the metal in the olfactory epithelium and the brain. *Toxicol Appl Pharmacol* 156: 119-128.

Henry-Sam GA, Iszard MB (2001). A comparative study of the reproductive toxicity of manganese in rats and mice. *FASEB J*, 15: A585.

Herrenkohl LR (1979). Prenatal stress reduces fertility and fecundity in female offspring. *Science* 206: 1097-1099.

Hong JS, Hung CR, Seth PK, Mason G, Bondy SC (1984). Effect of manganese treatment on the levels of neurotransmitters, hormones, and neuropeptides: modulation by stress. *Environ Res* 34: 242-249.

Hua MS, Huang CC (1991). Chronic occupational exposure to manganese and neurobehavioral function. *J Clin Exp Neuropsych* 13: 495-507.

Huang CC, Chu NS, Lu CS, Calne DB (1997). Cock gait in manganese intoxication. *Movement Disord* 12: 807-808.

Huang CC, Chu NS, Lu CS, Chen RS, Calne DB (1998). Long-term progression in chronic manganism: ten years of follow-up. *Neurology* 50: 698-700.

Ingersoll RT, Montgomery EB, Aposhian HV (1995). Central nervous system toxicity of manganese. 1. Inhibition of spontaneous motor activity in rats after intrathecal administration of manganese chloride. *Fund Appl Toxicol* 27: 106-113.

Inoue N, Makita Y (1996). Neurological aspects in human exposures to manganese. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 415-422.

Inoue N, Tsukuda Y, Barbeau A (1975). Behavioral effects in rats following intranasal microinjection of manganese. *Brain Res* 95: 103-124.

Iregren (1990). Psychological test performance in foundry workers exposed to low levels of manganese. *Neurotoxicol Teratol* 12: 673-677.

Iregren A (1994). Using psychological tests for early detection of neurotoxic effects of low level manganese exposure. *Neurotoxicology* 15: 671-678.

Iregren A (1999). Manganese neurotoxicity in industrial exposures: proof of effects, critical exposure level, and sensitive tests. *Neurotoxicology* 20: 315-324.

Iszard MB, Henry-Sam GA, Ponnappakkam TP (2001). Evaluation of the reproductive system in CD-1 mice on oral exposure to manganese acetate. *The Toxicologist* 60: 386-387.

Izgut-Uysal VN, Derin N, Agac A (2000). Effect of cold-restraint stress on the distribution of trace elements in rat tissues. *Biol Trace Elem Res* 78: 149-155.

Joels M (1997). Steroid hormones and excitatory in the mammalian brain. *Front Neuroendocrin* 18: 2-24.

Kavlock RJ, Chernoff N, Rogers EH (1985). The effect of acute maternal toxicity on fetal development in the mouse. *Terat Carci Mutagen* 5: 3-13.

Keen CL (1996). Teratogenic effects of essential trace elements. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 707-718.

Khera KS (1984). Maternal toxicity: a possible factor in fetal malformation in mice. *Teratology* 29: 411-416.

Khera KS (1987). Maternal toxicity in humans and animals. Effects on fetal development and criteria for detection. *Teratogen Carcin Mut* 7: 287-295.

Kimmel CA, Cuff JM, Kimmel GL, Heredia DJ, Tudor N, Silverman PM, Chen J (1993). Skeletal development following heat exposure in the rat. *Teratology* 47: 229-242.

Kimmel CA, Reginald OC, Robert ES (1976). Teratogenic potential of noise in mice and rats. *Toxicol Appl Pharmacol* 36: 239-245.

King JA, Edwards E (1999). Early stress and genetic influences on hypothalamic-pituitary-adrenal axis functioning in adulthood. *Horm Behav* 36: 79-85.



Kinsley C, Svare B (1986). Prenatal stress effects: are they mediated by reductions in maternal food and water intake and body weight gain? *Physiol Behav* 37: 191-193.

Kishi R, Chen BQ, Katakura Y, Ikeda T, Miyake H (1995). Effect of prenatal exposure to styrene on the neurobehavioral development, activity, motor coordination, and learning behavior of rats. *Neurotoxicol Teratol* 17: 121-130.

Kohler E, Knospe S (1982). Prevention of the development of hyperglycemia in sane rats by adrenal medullectomy. *Horm Metab Res* 14: 574-579.

Koob GF, Heinrichs SC, Menzaghi F, Pich EM, Britton KT (1994). Corticotropin releasing factor, stress and behavior. *Semin Neurosci* 6: 221-229.

Kopin IJ (1994). Neurotransmitters and disorders of the basal ganglia. Chronic manganese poisoning. En: *Basic Neurochemistry*. 5<sup>th</sup> ed. Siegel GS, Agranoff BW, Albers RW, Molinoff PB (eds), Raven Press, New York, cap 44, pp 899-918.

Krishnan K, Brodeur J (1994). Toxic interactions among environmental pollutants: corroborating laboratory observations with human experience. *Environ Health Persp* 102 (supl 9): 11-17.

Lachuer J, Delton I, Buda M, Tappaz M (1994). The habituation of brainstem catecholaminergic groups to chronic daily restraint stress is stress specific like that of the hypothalamo-pituitary-adrenal axis. *Brain Res* 638: 196-202.

Ladron de Guevara J, Moya Pueyo V (1995). *Toxicología Médica. Clínica y Laboral*. Interamericana, McGraw-Hill, Madrid.

Lai JCK, Minski MJ, Chan AWK, Leung TKC, Lim L (1999). Manganese mineral interactions in brain. *Neurotoxicology* 20: 433-444.

Landrigan PJ, Graham DG, Thomas RD (1993). Strategies for the prevention of environmental neurotoxic illness. *Environ Res* 61: 157-163.

Laskey JW, Rehnberg GL, Hein JF, Carter SD (1982). Effects of chronic manganese ( $Mn_3O_4$ ) exposure on selected reproductive parameters in rats. *J Toxicol Environ Health* 8: 677-687.

Lemaire V, Koehl M, Le Moal M, Abrous DN (2000). Prenatal stress produces deficits associated with an inhibition of neurogenesis in the hippocampus. *Neurobiology* 97: 11032-11037.

Lightman SL (1994). How does the hypothalamus respond to stress? *Semin Neurosci* 6: 215-219.

Lipe GW, Duhart H, Newport GD, Slikker W Jr, Ali SF (1999). Effect of manganese on the concentration of amino acids in different regions of the rat brain. *J Environ Sci Health B* 34: 119-132.

Lloyd RV (1995). Mechanism of the manganese-catalyzed autoxidation of dopamine. *Chem Res Toxicol* 8: 111-116.

Lown BA, Morganti JB, D'Agostini R, Stineman CH, Massaro EJ (1984). Effects of the postnatal development of the mouse, of preconception, postconception and/or suckling exposure to manganese via maternal inhalation exposure to  $Mn O_2$  dust. *Neurotoxicology* 5: 119-129.

Lucchini R, Albini E, Placidi D, Alessio L (2000a). Mechanism of neurobehavioral alteration. *Toxicol Lett* 112-113: 35-39.

Lucchini R, Albini E, Placidi D, Gasparotti R, Pigozzi MG, Montani G, Alessio L (2000b). Brain magnetic resonance imaging and manganese exposure. *Neurotoxicology* 21: 769-776.

Lucchini R, Apostoli P, Perrone C, Placidi D, Albini E, Migliorati P, Mergler D, Sassine M-P, Palmi S, Alessio L (1999). Long term exposure to "low levels" of

---

manganese oxides and neurofunctional changes in ferroalloy workers. *Neurotoxicology* 20: 287-298.

Lucchini R, Selis L, Folli D, Apostoli P, Mutti A, Vanoni O, Iregren A, Alessio L (1995). Neurobehavioral effects of manganese in workers from a ferroalloy plant after temporary cessation of exposure. *Scand J Work Env Hea* 21: 143-149.

Luine V, Martínez C, Villegas M, Magariños AM, McEwen BS (1996). Restraint stress reversibly enhances spatial memory performance. *Physiol Behav* 59: 27-32.

Luine V, Villegas M, Martínez C, McEwen BS (1994). Repeated stress causes reversible impairments of spatial memory performance. *Brain Res* 639: 167-170.

Lupien SJ, Gaudreau S, Tchiteya BM, Maheu F, Sharma S, Nair NPV, Hauger RL, McEwen BS, Meaney MJ (1997). Stress-induced declarative memory impairment in health elderly subjects: relationship to cortisol reactivity. *J Clin Endocr Metab* 82: 2070-2075.

Lupien SJ, McEwen BS (1997). The acute effects of corticosteroids on cognition: integration of animal and human model studies. *Brain Res Rev* 24: 1-27.

MacPhail RC (1994). Behavioral analysis in neurotoxicology. En: *Neurobehavioral Toxicity. Analysis and interpretation*. Weiss B, O'Donoghue JL (eds), Raven Press, New York, cap 2, pp 7-18.

Magariños AM, García-Verdugo JM, McEwen BS (1997). Chronic stress alters synaptic terminal structure in hippocampus. *Neurobiology* 94: 14002-14008.

Magariños AM, McEwen BS (1995). Stress induced atrophy of apical dendrites of hippocampal CA3c neurons: involvement of glucocorticoid secretion and excitatory amino acid receptors. *Neuroscience* 69: 89-98.

Magariños AM, Orchinik M, McEwen BS (1998). Morphological changes in the hippocampal CA3 region induced by non-invasive glucocorticoid administration: a paradox. *Brain Res* 809: 314-318.

Mailman RB, Mayleben M, Lawler CP (1996). Effects of toxic metals on neurotransmitters. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 627-638.

Manson JM, Kang YJ (1989). Test methods for assessing female reproductive and developmental toxicology. En: *Principles and methods of toxicology*. 2ed. Hayes AW (ed), Raven press, New York, pp 311-359.

Manzo L, Castoldi AF, Coccini T, Prockop LD (2001). Assessing effects of neurotoxic pollutants by biochemical markers. *Environ Res* 85: 31-36.

Marcilhac A, Siaud P (1996). Regulation of the adrenocorticotrophin response to stress by the central nucleus of the amygdala in rats depends upon the nature of the stressor. *Exp Physiol* 81: 1035-1038.

Marti O, Marti J, Armario A (1994). Effect of chronic stress on food intake in rats: influence of stressor intensity and duration of daily exposure. *Physiol Behav* 54: 747-753.

Martí-Nicolovius M, Portell-Cortés I, Morgado Bernal I (1998). Improvement of shuttle-box avoidance following post-training treatment in paradoxical sleep deprivation platforms in rats. *Physiol Behav* 43: 93-98.

McCormick CM, Smythe JW, Sharma S, Meaney MJ (1995). Sex-specific effects of prenatal stress on hypothalamic-pituitary-adrenal responses to stress and brain glucocorticoid receptor density in adult rats. *Dev Brain Res* 84: 55-61.

McEwen BS (1994a). Introduction: stress and nervous system. *Semin Neurosci* 6: 195-196.

McEwen BS (1994b). Endocrine effects on the brain and their relationship to behavior. En: Basic Neurochemistry. Siegel GS, Agranoff BW, Wayne R, Molinoff PB (eds), Raven Press, New York, pp 893-913.

McEwen BS (1997). Possible mechanisms for atrophy of the human hippocampus. *Mol Psychiatr* 2: 255-262.

McEwen BS (1999). Stress and hippocampal plasticity. *Annu Rev Neurosci* 22: 105-122.

McEwen BS, Sapolsky RM (1995). Stress and cognitive function. *Curr Opin Neurobiol* 5: 205-216.

McGivern RF, Poland RE, Taylor AN, Branch BJ, Raum WJ (1986). Prenatal stress feminizes adult male saccharin preference and maze learning: antagonism by propranolol. *Monogr Neural Sci* 12: 172-178.

McIntosh LJ, Hong KE, Sapolsky RM (1998). Glucocorticoids may alter antioxidant enzyme capacity in the brain: baseline studies. *Brain Res* 791: 209-214.

McMillan DE (1999). A brief history of the neurobehavioral toxicity of manganese: some unanswered questions. *Neurotoxicology* 20: 499-508.

Meaney MJ, Tannenbaum B, Francis D, Bhatnagar S, Shanks N, Viau V, O'Donnell D, Plotsky PM (1994). Early environmental programming hypothalamic-pituitary-adrenal responses to stress. *Semin Neurosci* 6: 247-259.

Mena I (1979). Manganese poisoning. En: *Handbook of Clinical Neurology*. Vinken PJ, Bruyn GW (eds), Amsterdam, North Holland, pp 217-237.

Mergler D (1999). Neurotoxic effects of low level exposure to manganese in human populations. *Environ Res* 80: 99-102.

Mergler D, Baldwin M (1997). Early manifestations of manganese neurotoxicity in humans: an update. *Environ Res* 73: 92-100.

Mergler D, Baldwin M, Bélanger S, Larribe F, Beuter A, Bowler R, Panisset M, Edwards R, Geoffroy A, Sassine M-P, Hudnell K (1999). Manganese neurotoxicity, a continuum of dysfunction: results from a community based study. *Neurotoxicology* 20: 327-342.

Mergler D, Bélanger S, Larribe F, Panisset M, Bowler R, Baldwin M, Lebel J, Hundnell K (1998). Preliminary evidence of neurotoxicity associated with eating fish from the Upper St Lawrence river lakes. *Neurotoxicology* 19: 691-702.

Mergler D, Huel G, Bowler R, Iregren A, Bélanger S, Baldwin M, Tardif R, Smargiassi A, Martin L (1994). Nervous system dysfunction among workers with long-term exposure to manganese. *Environ Res* 54: 151-180.

Michel C, Fritz-Niggli H (1978). Induction of developmental anomalies in mice by maternal stress. *Experientia* 34: 105-106.

Miller DB, Chernoff N (1995). Restraint-induced stress in pregnant mice. Degree of immobilization affects maternal indices of stress and development outcome in offspring. *Toxicology* 98: 177-186.

Misselwitz B, Móuhler A, Weinmann HJ (1995). A toxicologic risk for using manganese complexes? A literature survey of existing data through several medical specialities. *Invest Radiol* 30: 611-620.

Moorcraft WH (1981). Heightened arousal in the 2-week-old rat: the importance of starvation. *Dev Psychobiol* 14: 187-199.

Moore KA, Burrows GD (1996). Stress and mental health. En: *Handbook of stress, medicine, and health*. Cooper CL (ed), CRC Press, Boca Raton, FL, cap 4, pp 87-100.

Morganti JB, Lown BA, Stineman CH, D'Agostino RB, Massaro EJ (1985). Uptake, distribution, and behavioral effect of inhalation exposure to manganese (Mn O<sub>2</sub>) in the adult mouse. *Neurotoxicology* 6: 1-15.

Morishina HO, Pedersen H, Finster M (1978). The influence of maternal psychological stress on the fetus. *Am J Obstet Gynecol* 131: 286-290.

Mormede P, Dantzer R, Montpied P, Bluthe RM, Laplante E, LeMoal M (1984). Influence of shock-induced fighting and social factors on pituitary-adrenal activity, prolactin and catecholamines synthesizing enzymes in rats. *Physiol Behav* 32: 723-729.

Morris RGM (1981). Spatial localization does not require the presence of local cues. *Learn Motiv* 12: 239-260.

Morris R (1984). Developmental of a water maze-procedure for studying spatial learning in the rat. *J Neurosci Meth* 11: 47-56.

Murata M, Takigawa H, Sakamoto H (1993). Teratogenic effects of noise and cadmium in mice: does noise have teratogenic potential? *J Toxicol Environ Health* 39: 237-245.

Murphy BL, Arnsten AFT, Jentsch JD, Roth RH (1996). Dopamine and spatial working memory in rats and monkeys: pharmacological reversal of stress-induced impairment. *J Neurosci* 16: 7768-7775.

Murphy VA, Rosenberg JM, Smith QR, Rapoport SI (1991). Elevation of brain manganese in calcium-deficient rats. *Neurotoxicology* 12: 255-263.

Nachtman JP, Tubben RE, Commissaris RL (1986). Behavioral effects of chronic manganese administration in rats: locomotor activity studies. *Neurobehav Toxicol Teratol* 8: 711-715.

Nagahara AH, Otto T, Gallagher M (1995). Entorhinal-perirhinal lesions impair performance of rats on two versions of place learning in the Morris water maze. *Behav Neurosci* 109: 3-9.

Nawrot PS, Cook RO, Staples RE (1980). Embriotoxicity of various noise stimuli in the mouse. *Teratology* 22: 279-289.

Nelson BK (1994). Interactions in developmental toxicology: a literature review and terminology proposal. *Teratology* 49: 33-71.

Nelson WE, Vaughan VC, McKay RJ (1980). *Tratado de Pediatría*. Salvat Editores SA, Barcelona, pp 1386-1387.

Neubert D, Barrach HJ, Merker HJ (1980). Drug-induced damage to the embryo or fetus (molecular and multilateral approach to prenatal toxicology). *Curr Top Pathol* 9: 241-233.

Newland MC (1999). Animal models of manganese neurotoxicity. *Neurotoxicology* 20: 415-432.

Orchinik M (1998). Glucocorticoids, stress, and behavior: shifting the timeframe. *Horm Behav* 34: 320-327.

Orchinik M, Weiland NG, McEwen BS (1995). Chronic exposure to stress levels of corticosterona alters GABA-A receptor subunit mRNA levels in rat hippocampus. *Brain Res* 34: 29-37.

Pal PK, Samii A, Calne DB (1999). Manganese neurotoxicity: a review of clinical features, imaging and pathology. *Neurotoxicology* 20: 227-238.

Pani L, Porcella A, Gessa GL (2000). The role of stress in the pathophysiology of the dopaminergic system. *Mol Psychiatr* 5: 14-21.



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Paparelli A, Soldani P, Breschi MC, Martinotti E, Scatizzi R, Berrettini S, Pellegrini A (1992). Effects of subacute exposure to noise on the noradrenergic innervation of the cardiovascular system in young and aged rats: a morphofunctional study. *J Neural Transm* 88: 105-113.

Papez JM (1937). A proposed mechanism of emotion. *Arch Neurol Psychiatr* 38: 725-743.

Pappas BA (2000). Perinatal manganese exposure in the rat. *Neurotoxicol Teratol* 22: 462.

Pappas BA, Zhang D, Davidson CM, Crowder T, Park GA, Fortin T (1997). Perinatal manganese exposure: behavioral, neurochemical, and histopathological effects in the rat. *Neurotoxicol Teratol* 19: 17-25.

Paré WP, Redei E (1993). Sex differences and stress response of WKY rats. *Physiol Behav* 54: 1179-1185.

Passchier-Vermeer W, Passchier WF (2000). Noise exposure and public health. *Environ Health Perspect* 108: 123-131.

Paternain JL, Llobet JM, Domingo JL, Corbella J (1985). Estudios en ratas de los efectos producidos por la administración oral de  $\text{CoCl}_2$  sobre la fertilidad, gestación, parto y lactancia. *Rev Toxicología*, 2: 93-103.

Paule MG, Reuhl K, Chen JJ, Ali SF, Slikker WJr (1996). Developmental toxicology of trimethyltin in the rat. *Toxicol Appl Pharmacol* 84: 412-417.

Peters DA (1982). Prenatal stress: effects on brain biogenic amine and plasma corticosterone level. *Pharmacol Biochem Behav* 17: 721-725.

Plunket ER (1978). Manual de Toxicología Industrial. Enciclopedia de la Química Industrial -tomo 12. Ediciones Urmo S.A, Bilbao.

Pollard I (1986). Prenatal stress effects over two generation in rats. *J Endocrinol* 109: 239-244.

Porter NM, Landfield PW (1998). Stress hormones and brain aging: adding injury to insult? *Nat Neurosci*, 1: 3-4.

Prunell M, Escorihuela RM, Fernández-Teruel A, Núñez JF, Tobeña A (1994). Anxiolytic profiles of alprazolam and ethanol in the elevated plus-maze test and the early acquisition of shuttlebox avoidance. *Pharmacol Res* 29: 37-46.

Pucilowski O, Overstreet DH, Rezvani AH, Janowsky DS (1993). Chronic mild stress-induced anhedonia: greater effect in a genetic rat model of depression. *Physiol Behav* 54: 1215-1220.

Rasco JF, Hood RD (1994). Effects of maternal restraint stress and sodium arsenate in mice. *Reprod Toxicol* 8: 49-54.

Rasco JF, Hood RD (1995). Maternal restraint stress-enhanced teratogenicity of all-trans-retinoic acidin CD-1 mice. *Teratology* 51: 57-62.

Rattner BA, Michael SD, Brinkley HF (1979). Plasma gonadotrophins and progesterona concentrations during various degrees of underfeeding in pregnant mice. *J Reprod Fertil* 56: 587-591.

Reagan LP, McEwen BS (1997). Controversies surrounding glucocorticoid-mediated cell death in the hippocampus. *J Chem Neuroanat* 13: 149-167.

Repetto, M (1997). *Toxicología fundamental*. Díaz de Santos, Madrid.

Rhees RW, Fleming DE (1981). Effects of malnutrition, maternal stress, or ACTH injection during pregnancy on sexual behavior of male offspring. *Physiol Behav* 27: 879-882.

Rivera S, Sanfeliu C, Rodríguez-Farré E (1990). Behavioral changes induced in developing rats by an early postnatal exposure to lindane. *Neurotoxicol Teratol* 12: 591-595.

Roels H, Ghyselen P, Buchet J, Ceulemans E, Lauwerys R (1992). Assessment of the permissible exposure level to manganese in workers exposed to manganese oxide dust. *Br J Ind Med* 49: 25-34.

Roels H, Lauwerys R, Buchet JP, Genet P, Sarhan MJ, Hanotiau I, de Fays M, Bernard A, Stanescu D (1987): Epidemiological survey among workers exposed to manganese: effects on lung, central nervous system, and some biological indices. *Am J Ind Med* 11: 307-327.

Rooszendaal B, McGaugh JL (1997). Basolateral amygdala lesions block the memory-enhancing effect of glucocorticoid administration in the dorsal hippocampus of rats. *Eur J Neurosci* 9: 76-83.

Rowett HG (1960). *The rat as a small mammal*. John Murray, London. UK.

Rugh R (1990). *The mouse. Its reproduction and development*. Oxford Science Publications, Oxford. UK.

Russell PA (1973). Open-field defecation in rats: relationships with body weight and basal defecation level. *Br J Psychol* 64: 109-114.

Saito T, Fujimura M, Itoh T, Saito K (1995). Effects of various durations of restraint stress on the trace element metabolism in rat brain regions. *Trace Elem Electroly* 12: 89-94.

Salveti F, Chelli B, Gesi M, Pellegrini A, Giannaccini G, Lucacchini A, Martini C (2000). Effect of noise exposure on rat cardiac peripheral benzodiazepine receptors. *Life Sci* 66: 1165-1175.

Sánchez DJ, Colomina MT, Domingo JL (1998). Effect of vanadium on activity and learning in rats. *Physiol Behav* 63: 345-350.

Sánchez DJ, Domingo JL, Llobet JM, Keen CL (1993). Maternal and developmental toxicity of manganese in the mouse. *Toxicol Lett* 69: 45-52.

Sánchez DJ, Gómez M, Domingo JL, Llobet JM, Corbella J (1995). Relative efficacy of chelating agents on excretion and tissue distribution of manganese in mice. *J Appl Toxicol* 15: 285-288.

Sánchez DJ, Gómez M, Llobet JM, Corbella J, Domingo JL (1997). Effects of aluminum on the mineral metabolism of rats in relation to age. *Pharmacol Toxicol* 80: 11-18.

Sandi C, Venero C, Cordero MI (2001). Estrés, memoria y trastornos asociados. Implicaciones en el daño cerebral y el envejecimiento. Ariel Neurociencia, Barcelona.

Sandin B (1993). Estrés y salud: factores que intervienen entre el estrés y la enfermedad física. En: Estrés y psicopatología. Buendía J (ed), Ediciones Pirámide, Madrid, cap 9, pp 148-174.

Santos-Burgoa C, Rios C, Mercado LA, Arechiga-Serrano R, Cano-Valle F, Alatorre R, Texcalac-Sangrador JL, Villa-Barragan JP, Rodríguez-Agudelo Y, Montes S (2001). Exposure to manganese: health effects on the general population, a pilot study in central Mexico. *Environ Res* 85: 90-104.

Sapolsky RM (1994a). Glicocorticoides, stress and exacerbation of excitotoxic neuron death. *Semin Neurosci* 6: 323-331.

Sapolsky RM (1994b). Individual differences and the stress response. *Semin Neurosci* 6: 261-269.

Sapolsky RM (1995). ¿Por qué las cebras no tienen úlcera?: la guía del estrés. Alianza Editorial, Madrid.

Sapolsky RM, Romero LM, Munck AU (2000). How do glucocorticoids influence stress responses? Integrating permissive, suppressive, stimulatory, and preparative actions. *Endocr Rev* 21: 55-89.

Sato M (1991). Open-field test in mice: a methodological analysis. *Teratology* 44: 47B.

Schneider ML, Clarke AS, Kraemer GW, Roughton EC, Lubach GR, Rimm-Kaufman S, Schmidt D, Ebert M (1998). Prenatal stress alters brain biogenic amine levels in primates. *Dev Psychopathol* 10: 427-440.

Scialli AR (1988). Is stress a developmental toxin? *Reprod Toxicol* 1: 163-171.

Selye H (1936). The alarm reaction. *Can Med Assoc J* 34: 706.

Selye H (1955). Stress and disease. *Science* 122: 625-631.

Seth PK, Chandra SV (1984). Neurotransmitters and neurotransmitter receptors in developing and adult rats during manganese poisoning. *Neurotoxicology* 5: 67-76.

Seth PK, Chandra SV (1988). Neurotoxic effects of manganese. En: *Metal Neurotoxicity*. Bondy SC, Prasad KN (eds), CRC Press, FL, cap 2, pp 19-33.

Setlow B, McGaugh JL (1999). Involvement of the posteroventral caudate-putamen in memory consolidation in the morris water maze. *Neurobiol Learn Mem* 71: 240-247.

Shors TJ (2001). Acute stress rapidly and persistently enhances memory formation in the male rat. *Neurobiol Learn Mem* 75: 10-29.

Siegl P, Bergert KD (1982). [A method of early diagnostic monitoring in manganese exposure]. *Z Gesamte Hyg* 28: 524-526.

Sierra P, Chakrabarti S, Tounkara R, Loranger S, Kennedy G, Zayed J (1998). Bioaccumulation of manganese and its toxicity in feral pigeons (*Columba livia*) exposed to manganese oxide dust ( $Mn_3O_4$ ). *Environ Res* 79: 94-101.

Sjögren B, Iregren A, Frech W, Hagman M, Johansson L, Tesarz M, Wennberg A (1996). Effects on the nervous system among welders exposed to aluminum and manganese. *Occup Environ Med* 53: 32-40.

Slikker WJr (1994). Principles of developmental neurotoxicology. *Neurotoxicology* 15: 11-16.

Soldani P, Pellegrini A, Gesi M, Lenzi P, Cristofani R, Paparelli A (1997). SEM/TEM investigation of rat cardiac subcellular alterations induced by changing duration of noise stress. *Anat Rec* 248: 521-532.

Spranger M, Schwab S, Desiderato S, Bonmann E, Krieger D, Fandrey J (1998). Manganese augments nitric oxide synthesis in murine astrocytes: a new pathogenetic mechanism in manganism? *Exp Neurol* 149: 277-283.

St Omer VEV, Ali SF, Holson RR, Scalzo FM, Slikker WJr (1991). Behavioral and neurochemical effects of prenatal methylene dioxymethamphetamine (MDMA) exposure in rats. *Neurotoxicol Teratol* 13: 13-20.

Staples RE (1975). Definition of teratogenesis and teratogen. En: *Methods for detection of environmental agents that produce congenital defects*. Shepard TH, Miller JR, Marois M (eds), North Polland Publishing Co, Amsterdam, pp 25-26.

Stam R, Croiset G, Bruijnzeel AW, Visser TJ, Akkermans LMA, Wiegant VM (1999). Sex differences in long-term stress-induced clonic, behavioural and hormonal disturbances. *Life Sci* 64: 2837-2849.

Stott DN (1973). Follow-up study from birth of the effects of prenatal stress. *Dev Med Child Neurol* 15: 770-787.

Stout SC, Nemeroff CB (1994). Stress and psychiatric disorders. *Semin Neurosci* 6: 271-280.

St-Pierre A, Normandin L, Carrier G (2001). Bioaccumulation and locomotor effect of manganese dust in rats. *Inhal Toxicol* 13: 623-632.

Suter KF, Schön H (1985). Testing strategies in behavioral teratology: I. Testing battery approach. *Neurobehav Toxicol Teratol* 8: 561-566.

Sziraki I, Rauhala P, Kon Koh K, Bergen PV, Chiueh CC (1999). Implications for atypical antioxidative properties of manganese in iron-induced brain lipid peroxidation and copper-dependent low density lipoprotein conjugation. *Neurotoxicology* 20: 455-466.

Szuran T, Zimmermann E, Pliska V, Pfister HP, Welzl H (1991). Prenatal stress effects on exploratory activity and stress-induced analgesia in rats. *Dev Psychobiol* 24: 361-372.

Szuran T, Zimmermann E, Welzl H (1994). Water maze performance and hippocampal weight of prenatally stressed rats. *Behav Brain Res* 65: 153-155.

Takeda A, Ishiwatari S, Okada S (1999). Manganese uptake into rat brain during development and aging. *J Neurosci Res* 56: 93-98.

Thorne BM, Cook A, Donhoe T, Lyon S, Medeiros DM, Moutzoukis C (1987). Aluminum toxicity and behavior in the weanling Long-Evans rat. *Bull Psychon Soc* 25: 129-132.

Treinen KA, Gray TJB, Blazak WF (1995). Developmental toxicity of mangafodipir trisodium and manganese chloride in Sprague-Dawley rats. *Teratology* 52: 109-115.

University of Washington (1998). Neuroanatomy interactive syllabus, version 1.2.X. Atlas d'Anatomia.

Uno H, Eisele S, Sakai A, Shelton S, Baker E, DeJesus O, Holden J (1994). Neurotoxicity of glucocorticoids in the primate brain. *Horm Behav* 28: 336-348.

U.S. Environmental Protection Agency (1985). Toxic Substances Control Act Testing Guidelines, 40 CRF, part 798, subpart G, section 798.6050. *Federal Register*, 50: 39458-39460.

U.S. Environmental Protection Agency (1986). Guidelines for the health assessment of suspect developmental toxicants. *Federal Register* 51: 34028-34040.

U.S. Environmental Protection Agency (1991). Neurotoxicity Test Guidelines Addendum 10, Pesticide Assessment Guidelines Subdivision F. Publication PB 91-154617. National Technical Information Services, Springfield, UA.

U.S. Environmental Protection Agency (1991). Guidelines for the health assessment of suspect developmental toxicants. *Federal Register* 56: 63798-63826.

Valdés M, De Flores T (1986). *Psicobiología del estrés*. Ediciones Martínez Roca SA, Barcelona.

Vallée M, Mayo W, Dellu F, Le Moal M, Simon H, Maccari S (1997). Prenatal stress induced high anxiety and postnatal handling induced low anxiety in adult offspring: correlation with stress induced corticosterone secretion. *J Neurosci* 17: 2626-2636.

Verity MA (1999). Manganese neurotoxicity: a mechanistic hypothesis. *Neurotoxicology* 20: 489-498.

Vieregge P, Heinzow B, Korf G, Teichert H-M, Schleifenbaum P, Möisinger H-U (1995). Long term exposure to manganese in rural well water has no neurological effects. *Can J Neurol Sci* 22: 286-289.



Vitarella D, Wong BA, Moss OR, Dorman DC (2000). Pharmacokinetics of inhaled manganese phosphate in male Sprague-Dawley rats following subacute (14-day) exposure. *Toxicol Appl Pharmacol* 163: 279-285.

Vogel MH (1987). Stress –the neglected variable in experimental pharmacology and toxicology. *Trends Pharmacol Sci* 8: 35-38.

Vogel MH (1993). The effect of stress on toxicological investigations. *Hum Exp Toxicol* 12: 265-271.

Vom Saal FS (1983). Variation in infanticide and parenteral behavior in male mice due to prior intrauterine proximity to female fetuses: elimination by prenatal stress. *Physiol Behav* 30: 675-681.

Wadhwa PD, Porto M, Sandman CA, Garite TJ (1993). A biopsychosocial investigation of the effects of stress on birth outcomes. *Am J Obstet Gynecol* 168: 320.

Ward GR, Wainwright PE (1988). Reproductions in maternal food and water intake account for prenatal stress effects on neurobehavioral development in B6D2F2 mice. *Physiol Behav* 44: 781-786.

Webster WS, Valois AA (1987). Reproductive toxicology of manganese in rodents, including exposure during the postnatal period. *Neurotoxicology* 8: 437-444.

Wennberg A, Iregren A, Struwe G, Cizinsky G, Hagman M, Johansson L (1991). Manganese exposure in steel smelters a health hazard to the nervous system. *Scand J Work Environ Health* 17: 255-262.

Weiss B (1990). Risk assessment: the insidious nature of neurotoxicity and the aging brain. *Neurotoxicology* 11: 305-323.

Weiss B, O'Donoghue JL (1994). *Neurobehavioral Toxicity. Analysis and interpretation.* Raven Press, New York.

Wexler B (1980). Transplantation of pituitary and adrenal glands of spontaneously hypertensive rats into hypophysectomized or adrenalectomized, normotensive Sprague-Dawley rats. *Br J Exp Pathol* 61: 429-439.

Wood GE, Shors TJ (1998). Stress facilitates classical conditioning in females through activational effects of ovarian hormones. *Proc Natl Acad Sci USA* 95: 4066-4071.

Zelikoff JT, Bertin JE, Bubacher TM, Hunter ES, Miller RK, Silbergeld EK, Tabacova S, Rogers JM (1995). Health risks associated with prenatal metal exposure. *Fundam Appl Toxicol* 25: 162-170.

Zheng W (1996). Choroid plexus and mental toxicity. En: *Toxicology of Metals*. Chang LW (ed), CRC, Lewis Publishers, Boca Raton, FL, pp 609-626.