Increased manganese uptake by primary astrocyte cultures with altered iron status is mediated primarily by divalent metal transporter

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#	Paper	IF	Citations
81	Brain iron metabolism. *Seminars in Pediatric Neurology*, **2006**, 13, 142-8	2.9	204
80	Brain iron metabolism: neurobiology and neurochemistry. *Progress in Neurobiology*, **2007**, 83, 149-73	10.9	178
79	Inhibition of DAT function attenuates manganese accumulation in the globus pallidus. *Environmental Toxicology and Pharmacology*, **2007**, 23, 179-84	5.8	59
78	Gene expression profiling of human primary astrocytes exposed to manganese chloride indicates selective effects on several functions of the cells. *NeuroToxicology*, **2007**, 28, 478-89	4.4	30
77	In vivo mapping of temporospatial changes in manganese enhancement in rat brain during epileptogenesis. *NeuroImage*, **2007**, 38, 57-66	7.9	32
76	Tissue distribution of manganese in iron-sufficient or iron-deficient rats after stainless steel welding-fume exposure. *Inhalation Toxicology*, **2007**, 19, 563-72	2.7	14
75	Brain iron toxicity: differential responses of astrocytes, neurons, and endothelial cells. *Neurochemical Research*, **2007**, 32, 1196-208	4.6	146
74	The pivotal role of astrocytes in the metabolism of iron in the brain. *Neurochemical Research*, **2007**, 32, 1884-90	4.6	147
73	Manganese-enhanced MRI of the rat visual pathway: acute neural toxicity, contrast enhancement, axon resolution, axonal transport, and clearance of Mn(2+). *Journal of Magnetic Resonance Imaging*, **2008**, 28, 855-65	5.6	63
72	Manganese binding to the prion protein. *Journal of Biological Chemistry*, **2008**, 283, 12831-9	5.4	81
71	Measuring brain manganese and iron accumulation in rats following 14 weeks of low-dose manganese treatment using atomic absorption spectroscopy and magnetic resonance imaging. *Toxicological Sciences*, **2008**, 103, 116-24	4.4	62
70	Manganese neurotoxicity: lessons learned from longitudinal studies in nonhuman primates. *Environmental Health Perspectives*, **2009**, 117, 325-32	8.4	128
69	Uptake of ferrous iron by cultured rat astrocytes. *Journal of Neuroscience Research*, **2010**, 88, 563-71	4.4	56
68	Iron overload alters iron-regulatory genes and proteins, down-regulates osteoblastic phenotype, and is associated with apoptosis in fetal rat calvaria cultures. *Bone*, **2009**, 45, 972-9	4.7	65
67	The effects of prion protein expression on metal metabolism. *Molecular and Cellular Neurosciences*, **2009**, 41, 135-47	4.8	40
66	Manganese-enhanced magnetic resonance imaging of hypoxic-ischemic brain injury in the neonatal rat. *NeuroImage*, **2009**, 45, 880-90	7.9	35
65	Divalent metal transporter 1 is involved in amyloid precursor protein processing and Abeta generation. *FASEB Journal*, **2009**, 23, 4207-17	0.9	65

64	Altered manganese homeostasis and manganese toxicity in a Huntington's disease striatal cell model are not explained by defects in the iron transport system. *Toxicological Sciences*, **2010**, 117, 169-79	4.4	47
63	Synergistic accumulation of iron and zinc by cultured astrocytes. *Journal of Neural Transmission*, **2010**, 117, 809-17	4.3	35
62	Metal toxicity, liver disease and neurodegeneration. *Neurotoxicity Research*, **2010**, 18, 100-5	4.3	61
61	Aquaporin-4 in manganese-treated cultured astrocytes. *Glia*, **2010**, 58, 1490-9	9	48
60	The distribution of four trace elements (Fe, Mn, Cu, Zn) in forage and the relation to scrapie in Iceland. *Acta Veterinaria Scandinavica*, **2010**, 52, 34	2	3
59	Ferroportin is a manganese-responsive protein that decreases manganese cytotoxicity and accumulation. *Journal of Neurochemistry*, **2010**, 112, 1190-8	6	118
58	Manganese in children with attention-deficit/hyperactivity disorder: relationship with methylphenidate exposure. *Journal of Child and Adolescent Psychopharmacology*, **2010**, 20, 113-8	2.9	43
57	Copper accumulation by cultured astrocytes. *Neurochemistry International*, **2010**, 56, 451-60	4.4	57
56	Two routes of iron accumulation in astrocytes: ascorbate-dependent ferrous iron uptake via the divalent metal transporter (DMT1) plus an independent route for ferric iron. *Biochemical Journal*, **2010**, 432, 123-32	3.8	78
55	Infectious prion protein alters manganese transport and neurotoxicity in a cell culture model of prion disease. *NeuroToxicology*, **2011**, 32, 554-62	4.4	16
54	Manganese accumulation in the CNS and associated pathologies. *BioMetals*, **2011**, 24, 811-25	3.4	87
53	G0/G1 phase arrest and apoptosis induced by manganese chloride on cultured rat astrocytes and protective effects of riluzole. *Biological Trace Element Research*, **2011**, 144, 832-42	4.5	8
52	Changes in dietary iron exacerbate regional brain manganese accumulation as determined by magnetic resonance imaging. *Toxicological Sciences*, **2011**, 120, 146-53	4.4	77
51	Ebselen inhibits iron-induced tau phosphorylation by attenuating DMT1 up-regulation and cellular iron uptake. *Neurochemistry International*, **2012**, 61, 334-40	4.4	45
50	The binding and transport of alternative metals by transferrin. *Biochimica Et Biophysica Acta - General Subjects*, **2012**, 1820, 362-78	4	107
49	Update on a Pharmacokinetic-Centric Alternative Tier II Program for MMT-Part II: Physiologically Based Pharmacokinetic Modeling and Manganese Risk Assessment. *Journal of Toxicology*, **2012**, 2012, 791431	3.1	14
48	In vivo detection of excitotoxicity by manganese-enhanced MRI: comparison with physiological stimulation. *Magnetic Resonance in Medicine*, **2012**, 68, 234-40	4.4	10
47	Manganese neurotoxicity: a focus on glutamate transporters. *Annals of Occupational and Environmental Medicine*, **2013**, 25, 4	1.3	48

46	Iron depletion increases manganese uptake and potentiates apoptosis through ER stress. *NeuroToxicology*, **2013**, 38, 67-73	4.4	51
45	Manganese inhibits ATP-induced calcium entry through the transient receptor potential channel TRPC3 in astrocytes. *NeuroToxicology*, **2013**, 34, 160-6	4.4	24
44	Mechanisms of lead and manganese neurotoxicity. *Toxicology Research*, **2013**, 2, 99-114	2.6	109
43	Manganese efflux in Parkinsonism: insights from newly characterized SLC30A10 mutations. *Biochemical and Biophysical Research Communications*, **2013**, 432, 1-4	3.4	34
42	Chapter 10:Mechanism of Manganese-Induced Impairment of Astrocytic Glutamate Transporters. *Issues in Toxicology*, **2014**, 258-278	0.3	
41	Manganese in human parenteral nutrition: considerations for toxicity and biomonitoring. *NeuroToxicology*, **2014**, 43, 36-45	4.4	52
40	Ebselen, a promising antioxidant drug: mechanisms of action and targets of biological pathways. *Molecular Biology Reports*, **2014**, 41, 4865-79	2.8	183
39	Manganese Exposure and Neurocognitive Outcomes in Rural School-Age Children: The Communities Actively Researching Exposure Study (Ohio, USA). *Environmental Health Perspectives*, **2015**, 123, 1066-71	8.4	75
38	Mechanisms of Heavy Metal Neurotoxicity: Lead and Manganese. *Journal of Drug Metabolism & Toxicology*, **2015**, 06,		11
37	Neuroprotective effect of the active components of three Chinese herbs on brain iron load in a mouse model of Alzheimer's disease. *Experimental and Therapeutic Medicine*, **2015**, 9, 1319-1327	2.1	13
36	Age-related changes of brain iron load changes in the frontal cortex in APPswe/PS1E9 transgenic mouse model of Alzheimer's disease. *Journal of Trace Elements in Medicine and Biology*, **2015**, 30, 118-23	4.1	29
35	Prion infection in cells is abolished by a mutated manganese transporter but shows no relation to zinc. *Molecular and Cellular Neurosciences*, **2015**, 68, 186-93	4.8	6
34	Manganese neurotoxicity: behavioral disorders associated with dysfunctions in the basal ganglia and neurochemical transmission. *Journal of Neurochemistry*, **2016**, 136, 677-691	6	72
33	Mechanisms of divalent metal toxicity in affective disorders. *Toxicology*, **2016**, 339, 58-72	4.4	45
32	Uptake of manganese from manganese-lysine complex in the primary rat intestinal epithelial cells. *Journal of Animal Physiology and Animal Nutrition*, **2017**, 101, 147-158	2.6	8
31	Microglia amplify inflammatory activation of astrocytes in manganese neurotoxicity. *Journal of Neuroinflammation*, **2017**, 14, 99	10.1	143
30	Influence of iron metabolism on manganese transport and toxicity. *Metallomics*, **2017**, 9, 1028-1046	4.5	45
29	Understanding of the role of manganese in parkinsonism and Parkinson disease. *Neurology*, **2017**, 88, 338-339	6.5	8

28	Modelling iron mismanagement in neurodegenerative disease in vitro: paradigms, pitfalls, possibilities & practical considerations. *Progress in Neurobiology*, **2017**, 158, 1-14	10.9	14
27	Occupational Metal Exposure and Parkinsonism. *Advances in Neurobiology*, **2017**, 18, 143-158	2.1	17
26	Redox Reactions in Groundwater with Health Implications. **2017**,		2
25	Investigation of manganese homeostasis in dogs with anaemia and chronic enteropathy. *Open Veterinary Journal*, **2017**, 7, 360-366	1	3
24	Potential for stem cell treatment in manganism. *Neurochemistry International*, **2018**, 112, 134-145	4.4	3
23	The Divalent Metal Transporter 1 (DMT1) Is Required for Iron Uptake and Normal Development of Oligodendrocyte Progenitor Cells. *Journal of Neuroscience*, **2018**, 38, 9142-9159	6.6	19
22	New Progress on the Role of Glia in Iron Metabolism and Iron-Induced Degeneration of Dopamine Neurons in Parkinson's Disease. *Frontiers in Molecular Neuroscience*, **2017**, 10, 455	6.1	35
21	Iron and Alzheimer's Disease: An Update on Emerging Mechanisms. *Journal of Alzheimer's Disease*, **2018**, 64, S379-S395	4.3	127
20	Uptake of Manganese from the Manganese-Lysine Complex in Primary Chicken Intestinal Epithelial Cells. *Animals*, **2019**, 9,	3.1	4
19	Manganese-Induced Neurotoxicity: New Insights Into the Triad of Protein Misfolding, Mitochondrial Impairment, and Neuroinflammation. *Frontiers in Neuroscience*, **2019**, 13, 654	5.1	79
18	Role of Astrocytes in Manganese Neurotoxicity Revisited. *Neurochemical Research*, **2019**, 44, 2449-2459	4.6	13
17	Manganese-enhanced magnetic resonance imaging in the whole visual pathway: chemical identification and neurotoxic changes. *Acta Radiologica*, **2019**, 60, 1653-1662	2	1
16	Iron Metabolism in the Peripheral Nervous System: The Role of DMT1, Ferritin, and Transferrin Receptor in Schwann Cell Maturation and Myelination. *Journal of Neuroscience*, **2019**, 39, 9940-9953	6.6	6
15	Proximate Composition, Minerals and Antioxidant Activity of Artichoke Leaf Extracts. *Biological Trace Element Research*, **2020**, 194, 589-595	4.5	9
14	Manganese Accumulation in the Brain via Various Transporters and Its Neurotoxicity Mechanisms. *Molecules*, **2020**, 25,	4.8	6
13	The effects of manganese overexposure on brain health. *Neurochemistry International*, **2020**, 135, 104688	4.4	30
12	Astrocytes in heavy metal neurotoxicity and neurodegeneration. *Brain Research*, **2021**, 1752, 147234	3.7	13
11	In vivo multi-parametric manganese-enhanced MRI for detecting amyloid plaques in rodent models of Alzheimer's disease. *Scientific Reports*, **2021**, 11, 12419	4.9	1

10	Electron paramagnetic spectrum of dimanganic human serum transferrin. *Polyhedron*, **2021**, 203, 115224	2.7	1
9	H-ferritin expression in astrocytes is necessary for proper oligodendrocyte development and myelination. *Glia*, **2021**, 69, 2981-2998	9	1
8	Potential of Multiscale Astrocyte Imaging for Revealing Mechanisms Underlying Neurodevelopmental Disorders. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
7	Association of multi-metals exposure with intelligence quotient score of children: A prospective cohort study. *Environment International*, **2021**, 155, 106692	12.9	6
6	Manganese and Neurodegeneration. **2017**, 117-151		1
5	Manganese-stimulated redox cycling of dopamine derivatives: Implications for manganism.. *NeuroToxicology*, **2022**, 90, 10-18	4.4	0
4	Astroglial Iron Homeostasis and Neurodegenerative Diseases. **2022**, 387-400		
3	D-Ribose-LCysteine attenuates manganese-induced cognitive and motor deficit, oxidative damage, and reactive microglia activation.. *Environmental Toxicology and Pharmacology*, **2022**, 93, 103872	5.8	0
2	Environmental toxicants and the developing brain. **2023**,		0
1	Neuroinflammation and white matter alterations in occupational manganese exposure assessed by diffusion basis spectrum imaging. **2023**, 97, 25-33		0