Marcus Conrad

List of Publications by Year
in descending order

140 papers	35,641 citations	15880 67 h-index	13274 135 g-index
153 all docs	153 docs citations	153 times ranked	27386 citing authors

#	Article	IF	Citations
1	Ferroptosis: A Regulated Cell Death Nexus Linking Metabolism, Redox Biology, and Disease. Cell, 2017, 171, 273-285.	13.5	4,081
2	Molecular mechanisms of cell death: recommendations of the Nomenclature Committee on Cell Death 2018. Cell Death and Differentiation, 2018, 25, 486-541.	5.0	4,036
3	Inactivation of the ferroptosis regulator Gpx4 triggers acute renal failure in mice. Nature Cell Biology, 2014, 16, 1180-1191.	4.6	2,241
4	Ferroptosis: mechanisms, biology and role in disease. Nature Reviews Molecular Cell Biology, 2021, 22, 266-282.	16.1	2,178
5	ACSL4 dictates ferroptosis sensitivity by shaping cellular lipid composition. Nature Chemical Biology, 2017, 13, 91-98.	3.9	2,069
6	FSP1 is a glutathione-independent ferroptosis suppressor. Nature, 2019, 575, 693-698.	13.7	1,624
7	Oxidized arachidonic and adrenic PEs navigate cells to ferroptosis. Nature Chemical Biology, 2017, 13, 81-90.	3.9	1,589
8	Glutathione Peroxidase 4 Senses and Translates Oxidative Stress into 12/15-Lipoxygenase Dependent- and AIF-Mediated Cell Death. Cell Metabolism, 2008, 8, 237-248.	7.2	1,009
9	Selenium Utilization by GPX4 Is Required to Prevent Hydroperoxide-Induced Ferroptosis. Cell, 2018, 172, 409-422.e21.	13.5	920
10	Ferroptosis at the crossroads of cancer-acquired drug resistance and immune evasion. Nature Reviews Cancer, 2019, 19, 405-414.	12.8	742
11	Role of GPX4 in ferroptosis and its pharmacological implication. Free Radical Biology and Medicine, 2019, 133, 144-152.	1.3	728
12	The Metabolic Underpinnings of Ferroptosis. Cell Metabolism, 2020, 32, 920-937.	7.2	590
13	On the Mechanism of Cytoprotection by Ferrostatin-1 and Liproxstatin-1 and the Role of Lipid Peroxidation in Ferroptotic Cell Death. ACS Central Science, 2017, 3, 232-243.	5.3	583
14	Regulated necrosis: disease relevance and therapeutic opportunities. Nature Reviews Drug Discovery, 2016, 15, 348-366.	21.5	481
15	The chemical basis of ferroptosis. Nature Chemical Biology, 2019, 15, 1137-1147.	3.9	477
16	Ultrasmall nanoparticles induce ferroptosis in nutrient-deprived cancer cells and suppress tumour growth. Nature Nanotechnology, 2016, 11, 977-985.	15.6	467
17	T cell lipid peroxidation induces ferroptosis and prevents immunity to infection. Journal of Experimental Medicine, 2015, 212, 555-568.	4.2	454
18	Essential Role for Mitochondrial Thioredoxin Reductase in Hematopoiesis, Heart Development, and Heart Function. Molecular and Cellular Biology, 2004, 24, 9414-9423.	1.1	428

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19	The oxidative stress-inducible cystine/glutamate antiporter, system x c â^' : cystine supplier and beyond. Amino Acids, 2012, 42, 231-246.	1.2	424
20	Nano-targeted induction of dual ferroptotic mechanisms eradicates high-risk neuroblastoma. Journal of Clinical Investigation, 2018, 128, 3341-3355.	3.9	406
21	Ferroptosis Inhibition: Mechanisms and Opportunities. Trends in Pharmacological Sciences, 2017, 38, 489-498.	4.0	389
22	GPx4, Lipid Peroxidation, and Cell Death: Discoveries, Rediscoveries, and Open Issues. Antioxidants and Redox Signaling, 2018, 29, 61-74.	2.5	377
23	Regulation of lipid peroxidation and ferroptosis in diverse species. Genes and Development, 2018, 32, 602-619.	2.7	339
24	Iron and ferroptosis: A still illâ€defined liaison. IUBMB Life, 2017, 69, 423-434.	1.5	325
25	Cytoplasmic Thioredoxin Reductase Is Essential for Embryogenesis but Dispensable for Cardiac Development. Molecular and Cellular Biology, 2005, 25, 1980-1988.	1.1	315
26	Identification and Successful Negotiation of a Metabolic Checkpoint in Direct Neuronal Reprogramming. Cell Stem Cell, 2016, 18, 396-409.	5.2	307
27	Mitochondrial glutathione peroxidase 4 disruption causes male infertility. FASEB Journal, 2009, 23, 3233-3242.	0.2	251
28	The cystine/cysteine cycle: a redox cycle regulating susceptibility versus resistance to cell death. Oncogene, 2008, 27, 1618-1628.	2.6	248
29	European contribution to the study of ROS: A summary of the findings and prospects for the future from the COST action BM1203 (EU-ROS). Redox Biology, 2017, 13, 94-162.	3.9	242
30	Ferroptosis and necroinflammation, a yet poorly explored link. Cell Death and Differentiation, 2019, 26, 14-24.	5.0	236
31	The Nuclear Form of Phospholipid Hydroperoxide Glutathione Peroxidase Is a Protein Thiol Peroxidase Contributing to Sperm Chromatin Stability. Molecular and Cellular Biology, 2005, 25, 7637-7644.	1.1	233
32	Identification of a specific sperm nuclei selenoenzyme necessary for protamine thiol crossâ€linking during sperm maturation. FASEB Journal, 2001, 15, 1236-1238.	0.2	232
33	The ferroptosis inducer erastin irreversibly inhibits system xcâ^' and synergizes with cisplatin to increase cisplatinâ€™s cytotoxicity in cancer cells. Scientific Reports, 2018, 8, 968.	1.6	222
34	Selenoprotein Gene Nomenclature. Journal of Biological Chemistry, 2016, 291, 24036-24040.	1.6	207
35	Glutathione peroxidase 4 and vitamin E cooperatively prevent hepatocellular degeneration. Redox Biology, 2016, 9, 22-31.	3.9	201
36	Oxytosis/Ferroptosisâ€"(Re-) Emerging Roles for Oxidative Stress-Dependent Non-apoptotic Cell Death in Diseases of the Central Nervous System. Frontiers in Neuroscience, 2018, 12, 214.	1.4	197

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37	Neuronal selenoprotein expression is required for interneuron development and prevents seizures and neurodegeneration. FASEB Journal, 2010, 24, 844-852.	0.2	193
38	System xcâˆ’ and Thioredoxin Reductase 1 Cooperatively Rescue Glutathione Deficiency. Journal of Biological Chemistry, 2010, 285, 22244-22253.	1.6	183
39	Bid-mediated mitochondrial damage is a key mechanism in glutamate-induced oxidative stress and AIF-dependent cell death in immortalized HT-22 hippocampal neurons. Cell Death and Differentiation, 2011, 18, 282-292.	5.0	161
40	MDM2 and MDMX promote ferroptosis by PPARÎ±-mediated lipid remodeling. Genes and Development, 2020, 34, 526-543.	2.7	156
41	Quantitative Profiling of Protein Carbonylations in Ferroptosis by an Aniline-Derived Probe. Journal of the American Chemical Society, 2018, 140, 4712-4720.	6.6	139
42	Combined Deficiency in Glutathione Peroxidase 4 and Vitamin E Causes Multiorgan Thrombus Formation and Early Death in Mice. Circulation Research, 2013, 113, 408-417.	2.0	127
43	Selenium and GPX4, a vital symbiosis. Free Radical Biology and Medicine, 2018, 127, 153-159.	1.3	127
44	Loss of Thioredoxin Reductase 1 Renders Tumors Highly Susceptible to Pharmacologic Glutathione Deprivation. Cancer Research, 2010, 70, 9505-9514.	0.4	120
45	Dysfunction of the key ferroptosis-surveilling systems hypersensitizes mice to tubular necrosis during acute kidney injury. Nature Communications, 2021, 12, 4402.	5.8	116
46	Physiological role of phospholipid hydroperoxide glutathione peroxidase in mammals. Biological Chemistry, 2007, 388, 1019-1025.	1.2	111
47	Dopaminergic neurons of system x_c^{â€“}â€deficient mice are highly protected against 6â€hydroxydopamineâ€induced toxicity. FASEB Journal, 2011, 25, 1359-1369.	0.2	109
48	Fin56-induced ferroptosis is supported by autophagy-mediated GPX4 degradation and functions synergistically with mTOR inhibition to kill bladder cancer cells. Cell Death and Disease, 2021, 12, 1028.	2.7	107
49	Ferroptotic cell death triggered by conjugated linolenic acids is mediated by ACSL1. Nature Communications, 2021, 12, 2244.	5.8	104
50	EpCAM Is Involved in Maintenance of the Murine Embryonic Stem Cell Phenotype. Stem Cells, 2009, 27, 1782-1791.	1.4	98
51	Glutathione peroxidase 4 (Gpx4) and ferroptosis: what's so special about it?. Molecular and Cellular Oncology, 2015, 2, e995047.	0.3	97
52	Sorafenib fails to trigger ferroptosis across a wide range of cancer cell lines. Cell Death and Disease, 2021, 12, 698.	2.7	92
53	Persister cancer cells: Iron addiction and vulnerability to ferroptosis. Molecular Cell, 2022, 82, 728-740.	4.5	92
54	Novel Allosteric Activators for Ferroptosis Regulator Glutathione Peroxidase 4. Journal of Medicinal Chemistry, 2019, 62, 266-275.	2.9	91

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55	The Role of Thioredoxin Reductases in Brain Development. PLoS ONE, 2008, 3, e1813.	1.1	91
56	Selective activation of oxidized PTP1B by the thioredoxin system modulates PDGF-Î² receptor tyrosine kinase signaling. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13398-13403.	3.3	89
57	Rapid proteomic remodeling of cardiac tissue caused by total body ionizing radiation. Proteomics, 2011, 11, 3299-3311.	1.3	87
58	Human thioredoxin 2 deficiency impairs mitochondrial redox homeostasis and causes early-onset neurodegeneration. Brain, 2016, 139, 346-354.	3.7	86
59	12/15-lipoxygenaseâ€"derived lipid peroxides control receptor tyrosine kinase signaling through oxidation of protein tyrosine phosphatases. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15774-15779.	3.3	85
60	Glutathione Peroxidases at Work on Epididymal Spermatozoa: An Example of the Dual Effect of Reactive Oxygen Species on Mammalian Male Fertilizing Ability. Journal of Andrology, 2011, 32, 641-650.	2.0	85
61	Mutations in the mitochondrial thioredoxin reductase gene TXNRD2 cause dilated cardiomyopathy. European Heart Journal, 2011, 32, 1121-1133.	1.0	84
62	Targeting Ferroptosis: New Hope for As-Yet-Incurable Diseases. Trends in Molecular Medicine, 2021, 27, 113-122.	3.5	81
63	A Glutathione-Nrf2-Thioredoxin Cross-Talk Ensures Keratinocyte Survival and Efficient Wound Repair. PLoS Genetics, 2016, 12, e1005800.	1.5	80
64	The thioredoxin-1 system is essential for fueling DNA synthesis during T-cell metabolic reprogramming and proliferation. Nature Communications, 2018, 9, 1851.	5.8	77
65	Transgenic mouse models for the vital selenoenzymes cytosolic thioredoxin reductase, mitochondrial thioredoxin reductase and glutathione peroxidase 4. Biochimica Et Biophysica Acta - General Subjects, 2009, 1790, 1575-1585.	1.1	75
66	The redox environment triggers conformational changes and aggregation of hIAPP in Type II Diabetes. Scientific Reports, 2017, 7, 44041.	1.6	75
67	Cerebellar Hypoplasia in Mice Lacking Selenoprotein Biosynthesis in Neurons. Biological Trace Element Research, 2014, 158, 203-210.	1.9	73
68	Optimization of spatiotemporal gene inactivation in mouse heart by oral application of tamoxifen citrate. Genesis, 2007, 45, 11-16.	0.8	70
69	Mitochondrial Thioredoxin Reductase Is Essential for Early Postischemic Myocardial Protection. Circulation, 2011, 124, 2892-2902.	1.6	70
70	Expression of a Catalytically Inactive Mutant Form of Glutathione Peroxidase 4 (Gpx4) Confers a Dominant-negative Effect in Male Fertility. Journal of Biological Chemistry, 2015, 290, 14668-14678.	1.6	69
71	Changes in ferrous iron and glutathione promote ferroptosis and frailty in aging Caenorhabditis elegans. ELife, 2020, 9, .	2.8	68
72	Absence of Glutathione Peroxidase 4 Affects Tumor Angiogenesis through Increased 12/15-Lipoxygenase Activity. Neoplasia, 2010, 12, 254-263.	2.3	67

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73	Non-enzymatic lipid peroxidation initiated by photodynamic therapy drives a distinct ferroptosis-like cell death pathway. Redox Biology, 2021, 45, 102056.	3.9	67
74	Selenium: Tracing Another Essential Element of Ferroptotic Cell Death. Cell Chemical Biology, 2020, 27, 409-419.	2.5	66
75	Cystathionine Is a Novel Substrate of Cystine/Glutamate Transporter. Journal of Biological Chemistry, 2015, 290, 8778-8788.	1.6	65
76	Empowerment of 15-Lipoxygenase Catalytic Competence in Selective Oxidation of Membrane ETE-PE to Ferroptotic Death Signals, HpETE-PE. Journal of the American Chemical Society, 2018, 140, 17835-17839.	6.6	63
77	Testis-Specific Expression of the Nuclear Form of Phospholipid Hydroperoxide Glutathione Peroxidase (PHGPx). Biological Chemistry, 2003, 384, 635-643.	1.2	62
78	Targeting ferroptosis protects against experimental (multi)organ dysfunction and death. Nature Communications, 2022, 13, 1046.	5.8	60
79	Phosphoinositide 3-Kinases Upregulate System x_c^{â^’} <i>via</i> Eukaryotic Initiation Factor 2Î± and Activating Transcription Factor 4â€‰â€“â€‰A Pathway Active in Glioblastomas and Epilepsy. Antioxidants and Redox Signaling, 2014, 20, 2907-2922.	2.5	58
80	Targeted Disruption of Glutathione Peroxidase 4 in Mouse Skin Epithelial Cells Impairs Postnatal Hair Follicle Morphogenesis that Is Partially Rescued through Inhibition of COX-2. Journal of Investigative Dermatology, 2013, 133, 1731-1741.	0.3	56
81	Protein disulfide isomerase and glutathione are alternative substrates in the one Cys catalytic cycle of glutathione peroxidase 7. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 3846-3857.	1.1	53
82	Disruption of Thioredoxin Reductase 1 Protects Mice from Acute Acetaminophen-Induced Hepatotoxicity through Enhanced NRF2 Activity. Chemical Research in Toxicology, 2013, 26, 1088-1096.	1.7	53
83	Thiol switches in mitochondria: operation and physiological relevance. Biological Chemistry, 2015, 396, 465-482.	1.2	53
84	Cardiolipin Signaling Mechanisms: Collapse of Asymmetry and Oxidation. Antioxidants and Redox Signaling, 2015, 22, 1667-1680.	2.5	50
85	Broken hearts: Iron overload, ferroptosis and cardiomyopathy. Cell Research, 2019, 29, 263-264.	5.7	50
86	Role of the Mammalian RNA Polymerase II C-Terminal Domain (CTD) Nonconsensus Repeats in CTD Stability and Cell Proliferation. Molecular and Cellular Biology, 2005, 25, 7665-7674.	1.1	49
87	Unveiling the Molecular Mechanisms Behind Selenium-Related Diseases Through Knockout Mouse Studies. Antioxidants and Redox Signaling, 2010, 12, 851-865.	2.5	47
88	Knockout of Mitochondrial Thioredoxin Reductase Stabilizes Prolyl Hydroxylase 2 and Inhibits Tumor Growth and Tumor-Derived Angiogenesis. Antioxidants and Redox Signaling, 2015, 22, 938-950.	2.5	46
89	Endothelial Dysfunction, and A Prothrombotic, Proinflammatory Phenotype Is Caused by Loss of Mitochondrial Thioredoxin Reductase in Endothelium. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 1891-1899.	1.1	45
90	The nuclear form of glutathione peroxidase 4 is associated with sperm nuclear matrix and is required for proper paternal chromatin decondensation at fertilization. Journal of Cellular Physiology, 2012, 227, 1420-1427.	2.0	44

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91	Cathepsin B is an executioner of ferroptosis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2021, 1868, 118928.	1.9	44
92	Thioredoxin reductase 1 suppresses adipocyte differentiation and insulin responsiveness. Scientific Reports, 2016, 6, 28080.	1.6	42
93	Glutathione peroxidase 4 and vitamin E control reticulocyte maturation, stress erythropoiesis and iron homeostasis. Haematologica, 2020, 105, 937-950.	1.7	42
94	The arginine methyltransferase PRMT7 promotes extravasation of monocytes resulting in tissue injury in COPD. Nature Communications, 2022, 13, 1303.	5.8	42
95	ADF/cofilin proteins translocate to mitochondria during apoptosis but are not generally required for cell death signaling. Cell Death and Differentiation, 2012, 19, 958-967.	5.0	41
96	Characterization of a patient-derived variant of GPX4 for precision therapy. Nature Chemical Biology, 2022, 18, 91-100.	3.9	41
97	Embryonal erythropoiesis and aging exploit ferroptosis. Redox Biology, 2021, 48, 102175.	3.9	40
98	Induction of inducible nitric oxide synthase (iNOS) expression by oxLDL inhibits macrophage derived foam cell migration. Atherosclerosis, 2014, 235, 213-222.	0.4	39
99	Loss of the cystine/glutamate antiporter in melanoma abrogates tumor metastasis and markedly increases survival rates of mice. International Journal of Cancer, 2020, 147, 3224-3235.	2.3	39
100	Alterations in neuronal control of body weight and anxiety behavior by glutathione peroxidase 4 deficiency. Neuroscience, 2017, 357, 241-254.	1.1	38
101	Apolipoprotein E potently inhibits ferroptosis by blocking ferritinophagy. Molecular Psychiatry, 2022, , .	4.1	38
102	Epididymis Response Partly Compensates for Spermatozoa Oxidative Defects in snGPx4 and GPx5 Double Mutant Mice. PLoS ONE, 2012, 7, e38565.	1.1	37
103	Embryonic expression profile of phospholipid hydroperoxide glutathione peroxidase. Gene Expression Patterns, 2006, 6, 489-494.	0.3	35
104	Label-free protein profiling of formalin-fixed paraffin-embedded (FFPE) heart tissue reveals immediate mitochondrial impairment after ionising radiation. Journal of Proteomics, 2012, 75, 2384-2395.	1.2	35
105	Cysteine mutant of mammalian GPx4 rescues cell death induced by disruption of the wildâ€type selenoenzyme. FASEB Journal, 2011, 25, 2135-2144.	0.2	34
106	The antioxidant requirement for plasma membrane repair in skeletal muscle. Free Radical Biology and Medicine, 2015, 84, 246-253.	1.3	31
107	ROS, thiols and thiol-regulating systems in male gametogenesis. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 1566-1574.	1.1	31
108	Glutathione and thioredoxin dependent systems in neurodegenerative disease: What can be learned from reverse genetics in mice. Neurochemistry International, 2013, 62, 738-749.	1.9	30

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109	Nutritional and Metabolic Control of Ferroptosis. Annual Review of Nutrition, 2022, 42, 275-309.	4.3	30
110	Modulation of Glutathione Hemostasis by Inhibition of 12/15-Lipoxygenase Prevents ROS-Mediated Cell Death after Hepatic Ischemia and Reperfusion. Oxidative Medicine and Cellular Longevity, 2017, 2017, 1-12.	1.9	29
111	hIAPP forms toxic oligomers in plasma. Chemical Communications, 2018, 54, 5426-5429.	2.2	28
112	Nitric oxide protects against ferroptosis by aborting the lipid peroxidation chain reaction. Nitric Oxide - Biology and Chemistry, 2021, 115, 34-43.	1.2	28
113	Emerging roles for non-selenium containing ER-resident glutathione peroxidases in cell signaling and disease. Biological Chemistry, 2021, 402, 271-287.	1.2	26
114	Sec-containing TrxR1 is essential for self-sufficiency of cells by control of glucose-derived H2O2. Cell Death and Disease, 2014, 5, e1235-e1235.	2.7	25
115	The mitochondrial thioredoxin reductase system (TrxR2) in vascular endothelium controls peroxynitrite levels and tissue integrity. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	25
116	Ferroptosis: the Good, the Bad and the Ugly. Cell Research, 2020, 30, 1061-1062.	5.7	24
117	Remodeling of nuclear architecture by the thiodioxoxpiperazine metabolite chaetocin. Experimental Cell Research, 2010, 316, 1662-1680.	1.2	23
118	In vivo dynamics of acidosis and oxidative stress in the acute phase of an ischemic stroke in a rodent model. Redox Biology, 2021, 48, 102178.	3.9	22
119	Optimized Vector for Conditional Gene Targeting in Mouse Embryonic Stem Cells. BioTechniques, 2003, 34, 1136-1140.	0.8	21
120	Juggling with lipids, a game of Russian roulette. Trends in Endocrinology and Metabolism, 2021, 32, 463-473.	3.1	21
121	B- and T-cell-specific inactivation of thioredoxin reductase 2 does not impair lymphocyte development and maintenance. Biological Chemistry, 2007, 388, 1083-1090.	1.2	16
122	Mouse brain proteomics establishes MDGA1 and CACHD1 as in vivo substrates of the Alzheimer protease BACE1. FASEB Journal, 2020, 34, 2465-2482.	0.2	16
123	Selenium and iron, two elemental rivals in the ferroptotic death process. Oncotarget, 2018, 9, 22241-22242.	0.8	13
124	NFE2L1-mediated proteasome function protects from ferroptosis. Molecular Metabolism, 2022, 57, 101436.	3.0	13
125	Protein kinase-regulated expression and immune function of thioredoxin reductase 1 in mouse macrophages. Molecular Immunology, 2011, 49, 311-316.	1.0	12
126	Reduced mitochondrial resilience enables non-canonical induction of apoptosis after TNF receptor signaling in virus-infected hepatocytes. Journal of Hepatology, 2020, 73, 1347-1359.	1.8	11

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127	Non-invasive and high-throughput interrogation of exon-specific isoform expression. Nature Cell Biology, 2021, 23, 652-663.	4.6	11
128	Missense mutation in selenocysteine synthase causes cardio-respiratory failure and perinatal death in mice which can be compensated by selenium-independent GPX4. Redox Biology, 2021, 48, 102188.	3.9	11
129	Glioblastoma Relapses Show Increased Markers of Vulnerability to Ferroptosis. Frontiers in Oncology, 2022, 12, 841418.	1.3	10
130	Lipoxygenasesâ€"Killers against Their Will?. ACS Central Science, 2018, 4, 312-314.	5.3	8
131	Oxidative Stress, Selenium Redox Systems Including GPX/TXNRD Families. Molecular and Integrative Toxicology, 2018, , 111-135.	0.5	5
132	Mouse Models that Target Individual Selenoproteins. , 2016, , 567-578.		4
133	Glutathione Peroxidases. , 2018, , 260-276.		3
134	Mitochondrial and cytosolic thioredoxin reductase knockout mice. , 2006, , 195-206.		3
135	A cozy niche in an iron world. Signal Transduction and Targeted Therapy, 2020, 5, 261.	7.1	2
136	Glutathione Peroxidase 4 and Ferroptosis. , 2016, , 511-521.		1
137	Ferroptosis: Physiological and pathophysiological aspects. , 2020, , 149-166.		1
138	NNT in NSCLC: No need to worry?. Journal of Experimental Medicine, 2020, 217, .	4.2	1
139	Mouse Models for Glutathione Peroxidase 4 (GPx4). , 2011, , 547-559.		0
140	The thioredoxin reductase system is a critical factor in mediating acetaminophenâ€induced liver damage. FASEB Journal, 2011, 25, 100.6.	0.2	0