Johannes Hirrlinger

List of Publications by Year
in descending order

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86	6,879	66315 42	62565 80
papers	citations	h-index	g-index

92	92	92	8752
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Glutathione metabolism in brain. FEBS Journal, 2000, 267, 4912-4916.	0.2	647
2	Glutathione Pathways in the Brain. Biological Chemistry, 2003, 384, 505-16.	1.2	514
3	Oligodendroglial NMDA Receptors Regulate Glucose Import and Axonal Energy Metabolism. Neuron, 2016, 91, 119-132.	3.8	381
4	Peroxide detoxification by brain cells. Journal of Neuroscience Research, 2005, 79, 157-165.	1.3	373
5	In Vivo Fate Mapping and Expression Analysis Reveals Molecular Hallmarks of Prospectively Isolated Adult Neural Stem Cells. Cell Stem Cell, 2010, 7, 744-758.	5.2	337
6	Astroglial processes show spontaneous motility at active synaptic terminals in situ. European Journal of Neuroscience, 2004, 20, 2235-2239.	1.2	250
7	The Glutathione System of Peroxide Detoxification Is Less Efficient in Neurons than in Astroglial Cells. Journal of Neurochemistry, 2002, 72, 2523-2530.	2.1	201
8	Lack of the Kir4.1 Channel Subunit Abolishes K+ Buffering Properties of Astrocytes in the Ventral Respiratory Group: Impact on Extracellular K+ Regulation. Journal of Neurophysiology, 2006, 95, 1843-1852.	0.9	168
9	Temporal control of gene recombination in astrocytes by transgenic expression of the tamoxifen-inducible DNA recombinase variant CreERT2. Glia, 2006, 54, 11-20.	2.5	156
10	The multidrug resistance protein MRP1 mediates the release of glutathione disulfide from rat astrocytes during oxidative stress. Journal of Neurochemistry, 2001, 76, 627-636.	2.1	153
11	Expression of reef coral fluorescent proteins in the central nervous system of transgenic mice. Molecular and Cellular Neurosciences, 2005, 30, 291-303.	1.0	153
12	The cytosolic redox state of astrocytes: Maintenance, regulation and functional implications for metabolite trafficking. Brain Research Reviews, 2010, 63, 177-188.	9.1	152
13	Cooperative Phagocytes. American Journal of Pathology, 2009, 174, 2310-2323.	1.9	136
14	Split-Cre Complementation Indicates Coincident Activity of Different Genes In Vivo. PLoS ONE, 2009, 4, e4286.	1.1	134
15	NO mediates microglial response to acute spinal cord injury under ATP control in vivo. Glia, 2010, 58, 1133-1144.	2.5	132
16	Glutathione release from cultured brain cells: Multidrug resistance protein 1 mediates the release of GSH from rat astroglial cells. Journal of Neuroscience Research, 2002, 69, 318-326.	1.3	128
17	Expression of mRNAs of multidrug resistance proteins (Mrps) in cultured rat astrocytes, oligodendrocytes, microglial cells and neurones. Journal of Neurochemistry, 2002, 82, 716-719.	2.1	120
18	Ultrafast Action Potentials Mediate Kilohertz Signaling at a Central Synapse. Neuron, 2014, 84, 152-163.	3.8	111

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19	Adapting brain metabolism to myelination and longâ€range signal transduction. Glia, 2014, 62, 1749-1761.	2.5	102
20	Monitoring ATP dynamics in electrically active white matter tracts. ELife, 2017, 6, .	2.8	102
21	Glycinergic interneurons are functionally integrated into the inspiratory network of mouse medullary slices. Pflugers Archiv European Journal of Physiology, 2009, 458, 459-469.	1.3	98
22	Elevated levels of oxidized low-density lipoprotein and of catalase activity in follicular fluid of obese women. Molecular Human Reproduction, 2010, 16, 117-124.	1.3	93
23	Global Transcriptome Analysis of Genetically Identified Neurons in the Adult Cortex. Journal of Neuroscience, 2006, 26, 9956-9966.	1.7	88
24	Aminopeptidase N mediates the utilization of the GSH precursor CysGly by cultured neurons. Journal of Neuroscience Research, 2001, 66, 1003-1008.	1.3	86
25	Diversity of Functional Astroglial Properties in the Respiratory Network. Journal of Neuroscience, 2004, 24, 1358-1365.	1.7	86
26	Neurons exhibit Lyz2 promoter activity in vivo: Implications for using LysMâ€Cre mice in myeloid cell research. European Journal of Immunology, 2016, 46, 1529-1532.	1.6	84
27	Microglial Cells in Culture Express a Prominent Glutathione System for the Defense against Reactive Oxygen Species. Developmental Neuroscience, 2000, 22, 384-392.	1.0	80
28	Non-Canonical Control of Neuronal Energy Status by the Na+ Pump. Cell Metabolism, 2019, 29, 668-680.e4.	7.2	79
29	Relevance of Exocytotic Glutamate Release from Retinal Glia. Neuron, 2012, 74, 504-516.	3.8	69
30	Activation of Myenteric Glia during Acute Inflammation In Vitro and In Vivo. PLoS ONE, 2016, 11, e0151335.	1.1	69
31	Oligodendroglial cells in culture effectively dispose of exogenous hydrogen peroxide: comparison with cultured neurones, astroglial and microglial cells. Journal of Neurochemistry, 2002, 82, 635-644.	2.1	68
32	Purification of Glutathione Reductase from Bovine Brain, Generation of an Antiserum, and Immunocytochemical Localization of the Enzyme in Neural Cells. Journal of Neurochemistry, 2002, 73, 1422-1430.	2.1	68
33	Effects of dopamine on the glutathione metabolism of cultured astroglial cells: implications for Parkinson's disease. Journal of Neurochemistry, 2002, 82, 458-467.	2.1	67
34	Live imaging using a FRET glucose sensor reveals glucose delivery to all cell types in the Drosophila brain. Journal of Insect Physiology, 2018, 106, 55-64.	0.9	62
35	Heterogeneity of Astrocytes in Grey and White Matter. Neurochemical Research, 2021, 46, 3-14.	1.6	60
36	Chemotherapy-induced cell death in primary cerebellar granule neurons but not in astrocytes: in vitro paradigm of differential neurotoxicity. Journal of Neurochemistry, 2004, 91, 1067-1074.	2.1	54

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37	Kir4.1 channels regulate swelling of astroglial processes in experimental spinal cord edema. Journal of Neurochemistry, 2007, 103, 2620-2628.	2.1	51
38	Multidrug Resistance Protein 1â€Mediated Export of Glutathione and Glutathione Disulfide from Brain Astrocytes. Methods in Enzymology, 2005, 400, 395-409.	0.4	49
39	Osmotic swelling characteristics of glial cells in the murine hippocampus, cerebellum, and retina in situ. Journal of Neurochemistry, 2008, 105, 1405-1417.	2.1	48
40	Split-CreERT2: Temporal Control of DNA Recombination Mediated by Split-Cre Protein Fragment Complementation. PLoS ONE, 2009, 4, e8354.	1.1	48
41	Primary Cultures of Astrocytes and Neurons as Model Systems to Study the Metabolism and Metabolite Export from Brain Cells. Neuromethods, 2014, , 45-72.	0.2	46
42	The NAD⁺/NADH redox state in astrocytes: Independent control of the NAD⁺ and NADH content. Journal of Neuroscience Research, 2011, 89, 1956-1964.	1.3	45
43	Ca²⁺ signals of astrocytes are modulated by the NAD⁺/NADH redox state. Journal of Neurochemistry, 2012, 120, 1014-1025.	2.1	44
44	The Vinculin-Î”In20/21 Mouse: Characteristics of a Constitutive, Actin-Binding Deficient Splice Variant of Vinculin. PLoS ONE, 2010, 5, e11530.	1.1	41
45	Current technical approaches to brain energy metabolism. Glia, 2018, 66, 1138-1159.	2.5	40
46	The biphasic NAD(P)H fluorescence response of astrocytes to dopamine reflects the metabolic actions of oxidative phosphorylation and glycolysis. Journal of Neurochemistry, 2010, 115, 483-492.	2.1	39
47	Mixed miniature postsynaptic currents resulting from coâ€release of glycine and <scp>GABA</scp> recorded from glycinergic neurons in the neonatal respiratory network. European Journal of Neuroscience, 2013, 37, 1229-1241.	1.2	35
48	Relation between activityâ€induced intracellular sodium transients and ATP dynamics in mouse hippocampal neurons. Journal of Physiology, 2019, 597, 5687-5705.	1.3	35
49	Genetic ablation of VIAAT in glycinergic neurons causes a severe respiratory phenotype and perinatal death. Brain Structure and Function, 2015, 220, 2835-2849.	1.2	32
50	HCN channel-mediated neuromodulation can control action potential velocity and fidelity in central axons. ELife, 2019, 8, .	2.8	32
51	Application and modulation of a permanent hydrogen peroxide-induced oxidative stress to cultured astroglial cells. Brain Research Protocols, 1999, 4, 223-229.	1.7	30
52	Catalase in astroglia-rich primary cultures from rat brain: immunocytochemical localization and inactivation during the disposal of hydrogen peroxide. Neuroscience Letters, 2001, 297, 129-132.	1.0	30
53	A Transgenic Mouse Line Expressing the Red Fluorescent Protein tdTomato in GABAergic Neurons. PLoS ONE, 2015, 10, e0129934.	1.1	30
54	Expression of Multidrug Resistance Proteins (Mrps) in Astrocytes of the Mouse Brain: A Single Cell RT-PCR Study. Neurochemical Research, 2005, 30, 1237-1244.	1.6	28

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55	Genetic Deletion of Laminin Isoforms Î²2 and Î³3 Induces a Reduction in Kir4.1 and Aquaporin-4 Expression and Function in the Retina. PLoS ONE, 2011, 6, e16106.	1.1	28
56	Local energy on demand: Are â€˜spontaneousâ€™ astrocytic Ca 2+ -microdomains the regulatory unit for astrocyte-neuron metabolic cooperation?. Brain Research Bulletin, 2018, 136, 54-64.	1.4	28
57	NBCe1 mediates the regulation of the NADH/NAD⁺ redox state in cortical astrocytes by neuronal signals. Glia, 2018, 66, 2233-2245.	2.5	28
58	Mice Lacking the Circadian Modulators SHARP1 and SHARP2 Display Altered Sleep and Mixed State Endophenotypes of Psychiatric Disorders. PLoS ONE, 2014, 9, e110310.	1.1	26
59	Crosstalk of Signaling and Metabolism Mediated by the NAD+/NADH Redox State in Brain Cells. Neurochemical Research, 2015, 40, 2394-2401.	1.6	26
60	Structural myelin defects are associated with low axonal ATP levels but rapid recovery from energy deprivation in a mouse model of spastic paraplegia. PLoS Biology, 2020, 18, e3000943.	2.6	26
61	Activityâ€dependent modulation of intracellular ATP in cultured cortical astrocytes. Journal of Neuroscience Research, 2017, 95, 2172-2181.	1.3	25
62	FRETâ€based imaging of intracellular ATP in organotypic brain slices. Journal of Neuroscience Research, 2019, 97, 933-945.	1.3	24
63	Intracellular ATP levels in mouse cortical excitatory neurons varies with sleepâ€“wake states. Communications Biology, 2020, 3, 491.	2.0	24
64	Glycine transporter 1 expression in the ventral respiratory group is restricted to protoplasmic astrocytes. Brain Research, 2006, 1119, 182-189.	1.1	23
65	Multifunctional Roles of NAD+ and NADH in Astrocytes. Neurochemical Research, 2012, 37, 2317-2325.	1.6	21
66	GABA-Glycine Cotransmitting Neurons in the Ventrolateral Medulla: Development and Functional Relevance for Breathing. Frontiers in Cellular Neuroscience, 2019, 13, 517.	1.8	21
67	The Emergence of a Stable Neuronal Ensemble from a Wider Pool of Activated Neurons in the Dorsal Medial Prefrontal Cortex during Appetitive Learning in Mice. Journal of Neuroscience, 2020, 40, 395-410.	1.7	20
68	Dynamic Changes in Cytosolic ATP Levels in Cultured Glutamatergic Neurons During NMDA-Induced Synaptic Activity Supported by Glucose or Lactate. Neurochemical Research, 2015, 40, 2517-2526.	1.6	19
69	The postnatal development of ultrasonic vocalizationâ€associated breathing is altered in glycine transporter 2â€deficient mice. Journal of Physiology, 2019, 597, 173-191.	1.3	19
70	A perspective on astrocyte regulation of neural circuit function and animal behavior. Glia, 2022, 70, 1554-1580.	2.5	18
71	Suppression of SNAREâ€dependent exocytosis in retinal glial cells and its effect on ischemiaâ€induced neurodegeneration. Glia, 2017, 65, 1059-1071.	2.5	17
72	Nutrition-dependent changes of mouse adipose tissue compositions monitored by NMR, MS, and chromatographic methods. Analytical and Bioanalytical Chemistry, 2015, 407, 5113-5123.	1.9	15

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73	Novel Mutations in the Asparagine Synthetase Gene (ASNS) Associated With Microcephaly. Frontiers in Genetics, 2018, 9, 245.	1.1	15
74	Intravitreal AAV-Delivery of Genetically Encoded Sensors Enabling Simultaneous Two-Photon Imaging and Electrophysiology of Optic Nerve Axons. Frontiers in Cellular Neuroscience, 2018, 12, 377.	1.8	14
75	Transgenic expression of fluorescent proteins in respiratory neurons. Respiratory Physiology and Neurobiology, 2007, 159, 108-114.	0.7	13
76	Glycinergic Interneurons in the Respiratory Network of the Rhythmic Slice Preparation. Advances in Experimental Medicine and Biology, 2010, 669, 97-100.	0.8	13
77	A Dual Nanosensor Approach to Determine the Cytosolic Concentration of ATP in Astrocytes. Frontiers in Cellular Neuroscience, 2020, 14, 565921.	1.8	11
78	Inspiratory Off-Switch Mediated by Optogenetic Activation of Inhibitory Neurons in the preBÃ¶tzinger Complex In Vivo. International Journal of Molecular Sciences, 2021, 22, 2019.	1.8	11
79	Cell Type-Dependent Activation Sequence During Rhythmic Bursting in the PreBÃ¶tzinger Complex in Respiratory Rhythmic Slices From Mice. Frontiers in Physiology, 2018, 9, 1219.	1.3	9
80	The human ubiquitin C promoter drives selective expression in principal neurons in the brain of a transgenic mouse line. Neurochemistry International, 2011, 59, 976-980.	1.9	5
81	Deletion of the cell adhesion adaptor protein vinculin disturbs the localization of GFAP in Bergmann glial cells. Glia, 2013, 61, 1067-1083.	2.5	3
82	Fluorescent Protein-Expressing Neural Progenitor Cells as a Tool for Transplantation Studies. PLoS ONE, 2014, 9, e99819.	1.1	2
83	Astrocyte regulation of neural circuit function and animal behavior. Glia, 2022, 70, 1453-1454.	2.5	2
84	Molecular Mechanisms of Cognitive Impairment and Intellectual Disabilityâ€"Virtual ESN Mini-Conference in Conjunction with the FENS Forum, July 11â€“15, 2020. Journal of Molecular Neuroscience, 2020, 70, 1927-1933.	1.1	1
85	Extinction of cueâ€evoked foodâ€seeking recruits a GABAergic interneuron ensemble in the dorsal medial prefrontal cortex of mice. European Journal of Neuroscience, 2020, 52, 3723-3737.	1.2	1
86	Letter to the Editor Regarding â€œCyst-Peritoneal Shunt for the Treatment of a Progressive Intracerebral Cyst Associated with ASNS Mutation: Case Report and Literature Reviewâ€. World Neurosurgery, 2019, 130, 564-566.	0.7	0