

Michael MÃ¼ller

List of Publications by Year in descending order

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56
papers

2,417
citations

186209

28
h-index

206029

48
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57
all docs

57
docs citations

57
times ranked

3065
citing authors

#	ARTICLE	IF	CITATIONS
1	Lack of the Kir4.1 Channel Subunit Abolishes K ⁺ Buffering Properties of Astrocytes in the Ventral Respiratory Group: Impact on Extracellular K ⁺ Regulation. <i>Journal of Neurophysiology</i> , 2006, 95, 1843-1852.	0.9	168
2	Optical and pharmacological tools to investigate the role of mitochondria during oxidative stress and neurodegeneration. <i>Progress in Neurobiology</i> , 2006, 79, 136-171.	2.8	161
3	Na ⁺ and K ⁺ Concentrations, Extra- and Intracellular Voltages, and the Effect of TTX in Hypoxic Rat Hippocampal Slices. <i>Journal of Neurophysiology</i> , 2000, 83, 735-745.	0.9	146
4	Erythropoietin enhances hippocampal long-term potentiation and memory. <i>BMC Biology</i> , 2008, 6, 37.	1.7	129
5	Oxidative burden and mitochondrial dysfunction in a mouse model of Rett syndrome. <i>Neurobiology of Disease</i> , 2012, 48, 102-114.	2.1	111
6	5-HT ₇ /G ₁₂ Signaling Regulates Neuronal Morphology and Function in an Age-Dependent Manner. <i>Journal of Neuroscience</i> , 2012, 32, 2915-2930.	1.7	107
7	Ratiometric high-resolution imaging of JC-1 fluorescence reveals the subcellular heterogeneity of astrocytic mitochondria. <i>Pflügers Archiv European Journal of Physiology</i> , 2011, 462, 693-708.	1.3	89
8	Molecular determinants of Ca ²⁺ -dependent K ⁺ channel function in rat dorsal vagal neurones. <i>Journal of Physiology</i> , 2000, 527, 283-290.	1.3	85
9	Intrinsic Optical Signals in Rat Hippocampal Slices During Hypoxia-Induced Spreading Depression-Like Depolarization. <i>Journal of Neurophysiology</i> , 1999, 82, 1818-1831.	0.9	76
10	Na ⁺ Dependence and the Role of Glutamate Receptors and Na ⁺ Channels in Ion Fluxes During Hypoxia of Rat Hippocampal Slices. <i>Journal of Neurophysiology</i> , 2000, 84, 1869-1880.	0.9	72
11	Activating de novo mutations in NFE2L2 encoding NRF2 cause a multisystem disorder. <i>Nature Communications</i> , 2017, 8, 818.	5.8	72
12	Inhibition of major cationic inward currents prevents spreading depression-like hypoxic depolarization in rat hippocampal tissue slices. <i>Brain Research</i> , 1998, 812, 1-13.	1.1	70
13	A CAG repeat polymorphism of <i>KCNN3</i> predicts SK3 channel function and cognitive performance in schizophrenia. <i>EMBO Molecular Medicine</i> , 2011, 3, 309-319.	3.3	63
14	Mitochondrial organization and motility probed by two-photon microscopy in cultured mouse brainstem neurons. <i>Experimental Cell Research</i> , 2004, 303, 114-27.	1.2	59
15	Expression of constitutively active erythropoietin receptor in pyramidal neurons of cortex and hippocampus boosts higher cognitive functions in mice. <i>BMC Biology</i> , 2011, 9, 27.	1.7	56
16	Potassium-induced enhancement of persistent inward current in hippocampal neurons in isolation and in tissue slices. <i>Brain Research</i> , 2000, 885, 102-110.	1.1	50
17	H ₂ O ₂ -mediated modulation of cytosolic signaling and organelle function in rat hippocampus. <i>Pflügers Archiv European Journal of Physiology</i> , 2009, 458, 937-952.	1.3	50
18	Mitochondrial Inhibition Prior to Oxygen-Withdrawal Facilitates the Occurrence of Hypoxia-Induced Spreading Depression in Rat Hippocampal Slices. <i>Journal of Neurophysiology</i> , 2006, 96, 492-504.	0.9	46

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19	Disturbed redox homeostasis and oxidative stress: Potential players in the developmental regression in Rett syndrome. <i>Neuroscience and Biobehavioral Reviews</i> , 2019, 98, 154-163.	2.9	44
20	Enhanced Hypoxia Susceptibility in Hippocampal Slices From a Mouse Model of Rett Syndrome. <i>Journal of Neurophysiology</i> , 2009, 101, 1016-1032.	0.9	41
21	The free radical scavenger Trolox dampens neuronal hyperexcitability, reinstates synaptic plasticity, and improves hypoxia tolerance in a mouse model of Rett syndrome. <i>Frontiers in Cellular Neuroscience</i> , 2014, 8, 56.	1.8	39
22	Response properties of the genetically encoded optical H ₂ O ₂ sensor HyPer. <i>Free Radical Biology and Medicine</i> , 2014, 76, 227-241.	1.3	39
23	Effects of chloride transport inhibition and chloride substitution on neuron function and on hypoxic spreading-depression-like depolarization in rat hippocampal slices. <i>Neuroscience</i> , 2000, 97, 33-45.	1.1	38
24	The Critical Role of Spreading Depolarizations in Early Brain Injury: Consensus and Contention. <i>Neurocritical Care</i> , 2022, 37, 83-101.	1.2	36
25	Sulfhydryl Oxidation Reduces Hippocampal Susceptibility to Hypoxia-Induced Spreading Depression by Activating BK Channels. <i>Journal of Neurophysiology</i> , 2005, 94, 1091-1103.	0.9	34
26	ATP-independent anoxic activation of ATP-sensitive K ⁺ channels in dorsal vagal neurons of juvenile mice in situ. <i>Neuroscience</i> , 2002, 109, 313-328.	1.1	33
27	Dynamic, semi-quantitative imaging of intracellular ROS levels and redox status in rat hippocampal neurons. <i>NeuroImage</i> , 2011, 54, 2590-2602.	2.1	31
28	Redox Indicator Mice Stably Expressing Genetically Encoded Neuronal roGFP: Versatile Tools to Decipher Subcellular Redox Dynamics in Neuropathophysiology. <i>Antioxidants and Redox Signaling</i> , 2016, 25, 41-58.	2.5	30
29	Increased Mitochondrial Mass and Cytosolic Redox Imbalance in Hippocampal Astrocytes of a Mouse Model of Rett Syndrome: Subcellular Changes Revealed by Ratiometric Imaging of JC-1 and roGFP1 Fluorescence. <i>Oxidative Medicine and Cellular Longevity</i> , 2017, 2017, 1-15.	1.9	30
30	Aberrant redox homeostasis and mitochondrial dysfunction in Rett syndrome. <i>Biochemical Society Transactions</i> , 2014, 42, 959-964.	1.6	29
31	Tyrphostin AG126 exerts neuroprotection in CNS inflammation by a dual mechanism. <i>Glia</i> , 2015, 63, 1083-1099.	2.5	29
32	Infant Brain Stem Is Prone to the Generation of Spreading Depression During Severe Hypoxia. <i>Journal of Neurophysiology</i> , 2009, 101, 2395-2410.	0.9	28
33	Construction and performance of a custom-built two-photon laser scanning system. <i>Journal Physics D: Applied Physics</i> , 2003, 36, 1747-1757.	1.3	26
34	Imaging of respiratory-related population activity with single-cell resolution. <i>American Journal of Physiology - Cell Physiology</i> , 2007, 292, C508-C516.	2.1	26
35	Systemic Radical Scavenger Treatment of a Mouse Model of Rett Syndrome: Merits and Limitations of the Vitamin E Derivative Trolox. <i>Frontiers in Cellular Neuroscience</i> , 2016, 10, 266.	1.8	26
36	Neuronal Redox-Imbalance in Rett Syndrome Affects Mitochondria as Well as Cytosol, and Is Accompanied by Intensified Mitochondrial O ₂ Consumption and ROS Release. <i>Frontiers in Physiology</i> , 2019, 10, 479.	1.3	24

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37	Synaptic Alterations in Mouse Models for Alzheimer Disease—A Special Focus on N-Truncated Abeta 4-42. <i>Molecules</i> , 2018, 23, 718.	1.7	20
38	Dynamic Recording of Cell Death in the In Vitro Dorsal Vagal Nucleus of Rats in Response to Metabolic Arrest. <i>Journal of Neurophysiology</i> , 2003, 89, 551-561.	0.9	19
39	Temporo-Spectral Imaging of Intrinsic Optical Signals during Hypoxia-Induced Spreading Depression-Like Depolarization. <i>PLoS ONE</i> , 2012, 7, e43981.	1.1	19
40	Questioning Glutamate Excitotoxicity in Acute Brain Damage: The Importance of Spreading Depolarization. <i>Neurocritical Care</i> , 2022, 37, 11-30.	1.2	18
41	Effects of ATP and derivatives on neuropile glial cells of the leech central nervous system. , 2000, 29, 191-201.		15
42	Altered responses of Mecp2-deficient mouse brain stem to severe hypoxia. <i>Journal of Neurophysiology</i> , 2011, 105, 3067-3079.	0.9	15
43	Towards a consensus on developmental regression. <i>Neuroscience and Biobehavioral Reviews</i> , 2019, 107, 3-5.	2.9	14
44	Ionic mechanism of 4-aminopyridine action on leech neuropile glial cells. <i>Brain Research</i> , 1999, 826, 63-73.	1.1	13
45	Metabolomic Fingerprint of Mecp2-Deficient Mouse Cortex: Evidence for a Pronounced Multi-Faceted Metabolic Component in Rett Syndrome. <i>Cells</i> , 2021, 10, 2494.	1.8	12
46	Impaired hippocampal Ca ²⁺ homeostasis and concomitant K ⁺ channel dysfunction in a mouse model of rett syndrome during anoxia. <i>Neuroscience</i> , 2010, 171, 300-315.	1.1	11
47	Single potassium channels in neuropile glial cells of the leech central nervous system. <i>Brain Research</i> , 1997, 769, 245-255.	1.1	10
48	Reconfiguration of respiratory-related population activity in a rostrally tilted transversal slice preparation following blockade of inhibitory neurotransmission in neonatal rats. <i>Pflugers Archiv European Journal of Physiology</i> , 2008, 457, 185-195.	1.3	9
49	Overshooting Subcellular Redox-Responses in Rett-Mouse Hippocampus during Neurotransmitter Stimulation. <i>Cells</i> , 2020, 9, 2539.	1.8	9
50	Macroscopic and single-channel chloride currents in neuropile glial cells of the leech central nervous system. <i>Brain Research</i> , 1998, 781, 307-319.	1.1	8
51	Sulfhydryl oxidation: A potential strategy to achieve neuroprotection during severe hypoxia?. <i>Neuroscience</i> , 2008, 152, 903-912.	1.1	8
52	Restraint Stress Intensifies Interstitial K ⁺ Accumulation during Severe Hypoxia. <i>Frontiers in Pharmacology</i> , 2012, 3, 53.	1.6	7
53	Single ion channel currents in neuropile glial cells of the leech central nervous system. <i>Glia</i> , 1993, 9, 260-268.	2.5	5
54	Selective expression of a constitutively active erythropoietin receptor in <sc>GABA</sc>ergic neurons alters hippocampal network properties without affecting cognition. <i>Journal of Neurochemistry</i> , 2016, 136, 698-705.	2.1	4

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55	Live Imaging of Mitochondrial ROS Production and Dynamic Redox Balance in Neurons. Neuromethods, 2017, , 179-197.	0.2	2
56	Absolute Threshold. , 2008, , 3-3.		0