

# Michael Mller

## List of Publications by Citations

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56  
papers

1,959  
citations

26  
h-index

43  
g-index

57  
ext. papers

2,191  
ext. citations

5.4  
avg. IF

4.71  
L-index

#	Paper	IF	Citations
56	Optical and pharmacological tools to investigate the role of mitochondria during oxidative stress and neurodegeneration. <i>Progress in Neurobiology</i> , <b>2006</b> , 79, 136-71	10.9	149
55	Lack of the Kir4.1 channel subunit abolishes K <sup>+</sup> buffering properties of astrocytes in the ventral respiratory group: impact on extracellular K <sup>+</sup> regulation. <i>Journal of Neurophysiology</i> , <b>2006</b> , 95, 1843-52	3.2	146
54	Na <sup>(+)</sup> and K <sup>(+)</sup> concentrations, extra- and intracellular voltages, and the effect of TTX in hypoxic rat hippocampal slices. <i>Journal of Neurophysiology</i> , <b>2000</b> , 83, 735-45	3.2	125
53	Erythropoietin enhances hippocampal long-term potentiation and memory. <i>BMC Biology</i> , <b>2008</b> , 6, 37	7.3	102
52	5-HT7R/G12 signaling regulates neuronal morphology and function in an age-dependent manner. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 2915-30	6.6	87
51	Oxidative burden and mitochondrial dysfunction in a mouse model of Rett syndrome. <i>Neurobiology of Disease</i> , <b>2012</b> , 48, 102-14	7.5	84
50	Molecular determinants of Ca <sup>2+</sup> -dependent K <sup>+</sup> channel function in rat dorsal vagal neurones. <i>Journal of Physiology</i> , <b>2000</b> , 527 Pt 2, 283-90	3.9	77
49	Ratiometric high-resolution imaging of JC-1 fluorescence reveals the subcellular heterogeneity of astrocytic mitochondria. <i>Pflügers Archiv European Journal of Physiology</i> , <b>2011</b> , 462, 693-708	4.6	76
48	Na <sup>(+)</sup> dependence and the role of glutamate receptors and Na <sup>(+)</sup> channels in ion fluxes during hypoxia of rat hippocampal slices. <i>Journal of Neurophysiology</i> , <b>2000</b> , 84, 1869-80	3.2	67
47	Intrinsic optical signals in rat hippocampal slices during hypoxia-induced spreading depression-like depolarization. <i>Journal of Neurophysiology</i> , <b>1999</b> , 82, 1818-31	3.2	66
46	Inhibition of major cationic inward currents prevents spreading depression-like hypoxic depolarization in rat hippocampal tissue slices. <i>Brain Research</i> , <b>1998</b> , 812, 1-13	3.7	61
45	Mitochondrial organization and motility probed by two-photon microscopy in cultured mouse brainstem neurons. <i>Experimental Cell Research</i> , <b>2005</b> , 303, 114-27	4.2	56
44	Expression of constitutively active erythropoietin receptor in pyramidal neurons of cortex and hippocampus boosts higher cognitive functions in mice. <i>BMC Biology</i> , <b>2011</b> , 9, 27	7.3	46
43	Potassium-induced enhancement of persistent inward current in hippocampal neurons in isolation and in tissue slices. <i>Brain Research</i> , <b>2000</b> , 885, 102-10	3.7	46
42	Activating de novo mutations in NFE2L2 encoding NRF2 cause a multisystem disorder. <i>Nature Communications</i> , <b>2017</b> , 8, 818	17.4	44
41	A CAG repeat polymorphism of KCNN3 predicts SK3 channel function and cognitive performance in schizophrenia. <i>EMBO Molecular Medicine</i> , <b>2011</b> , 3, 309-19	12	44
40	H <sub>2</sub> O <sub>2</sub> -mediated modulation of cytosolic signaling and organelle function in rat hippocampus. <i>Pflügers Archiv European Journal of Physiology</i> , <b>2009</b> , 458, 937-52	4.6	44

39	Mitochondrial inhibition prior to oxygen-withdrawal facilitates the occurrence of hypoxia-induced spreading depression in rat hippocampal slices. <i>Journal of Neurophysiology</i> , <b>2006</b> , 96, 492-504	3.2	43
38	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> , <b>2014</b> , 8, 56	6.1	35
37	Enhanced hypoxia susceptibility in hippocampal slices from a mouse model of rett syndrome. <i>Journal of Neurophysiology</i> , <b>2009</b> , 101, 1016-32	3.2	33
36	Sulfhydryl oxidation reduces hippocampal susceptibility to hypoxia-induced spreading depression by activating BK channels. <i>Journal of Neurophysiology</i> , <b>2005</b> , 94, 1091-103	3.2	33
35	Response properties of the genetically encoded optical H <sub>2</sub> O <sub>2</sub> sensor HyPer. <i>Free Radical Biology and Medicine</i> , <b>2014</b> , 76, 227-41	7.8	32
34	ATP-independent anoxic activation of ATP-sensitive K <sup>+</sup> channels in dorsal vagal neurons of juvenile mice in situ. <i>Neuroscience</i> , <b>2002</b> , 109, 313-28	3.9	31
33	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> , <b>2000</b> , 97, 33-45	3.9	30
32	Redox Indicator Mice Stably Expressing Genetically Encoded Neuronal roGFP: Versatile Tools to Decipher Subcellular Redox Dynamics in Neuropathophysiology. <i>Antioxidants and Redox Signaling</i> , <b>2016</b> , 25, 41-58	8.4	27
31	Dynamic, semi-quantitative imaging of intracellular ROS levels and redox status in rat hippocampal neurons. <i>NeuroImage</i> , <b>2011</b> , 54, 2590-602	7.9	26
30	Aberrant redox homeostasis and mitochondrial dysfunction in Rett syndrome. <i>Biochemical Society Transactions</i> , <b>2014</b> , 42, 959-64	5.1	25
29	Infant brain stem is prone to the generation of spreading depression during severe hypoxia. <i>Journal of Neurophysiology</i> , <b>2009</b> , 101, 2395-410	3.2	25
28	Construction and performance of a custom-built two-photon laser scanning system. <i>Journal Physics D: Applied Physics</i> , <b>2003</b> , 36, 1747-1757	3	25
27	Imaging of respiratory-related population activity with single-cell resolution. <i>American Journal of Physiology - Cell Physiology</i> , <b>2007</b> , 292, C508-16	5.4	24
26	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> , <b>2017</b> , 2017, 3064016	6.7	20
25	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> , <b>2016</b> , 10, 266	6.1	20
24	Dynamic recording of cell death in the in vitro dorsal vagal nucleus of rats in response to metabolic arrest. <i>Journal of Neurophysiology</i> , <b>2003</b> , 89, 551-61	3.2	19
23	Neuronal Redox-Imbalance in Rett Syndrome Affects Mitochondria as Well as Cytosol, and Is Accompanied by Intensified Mitochondrial O <sub>2</sub> Consumption and ROS Release. <i>Frontiers in Physiology</i> , <b>2019</b> , 10, 479	4.6	17
22	Disturbed redox homeostasis and oxidative stress: Potential players in the developmental regression in Rett syndrome. <i>Neuroscience and Biobehavioral Reviews</i> , <b>2019</b> , 98, 154-163	9	17

21	Temporo-spectral imaging of intrinsic optical signals during hypoxia-induced spreading depression-like depolarization. <i>PLoS ONE</i> , <b>2012</b> , 7, e43981	3.7	16
20	Tyrphostin AG126 exerts neuroprotection in CNS inflammation by a dual mechanism. <i>Glia</i> , <b>2015</b> , 63, 1083-99	3.7	15
19	Effects of ATP and derivatives on neuropile glial cells of the leech central nervous system. <i>Glia</i> , <b>2000</b> , 29, 191-201	9	14
18	Synaptic Alterations in Mouse Models for Alzheimer Disease-A Special Focus on N-Truncated Abeta 4-42. <i>Molecules</i> , <b>2018</b> , 23,	4.8	13
17	Altered responses of MeCP2-deficient mouse brain stem to severe hypoxia. <i>Journal of Neurophysiology</i> , <b>2011</b> , 105, 3067-79	3.2	13
16	Ionic mechanism of 4-aminopyridine action on leech neuropile glial cells. <i>Brain Research</i> , <b>1999</b> , 826, 63-73.	3.7	12
15	Impaired hippocampal Ca <sup>2+</sup> homeostasis and concomitant K <sup>+</sup> channel dysfunction in a mouse model of Rett syndrome during anoxia. <i>Neuroscience</i> , <b>2010</b> , 171, 300-15	3.9	10
14	Single potassium channels in neuropile glial cells of the leech central nervous system. <i>Brain Research</i> , <b>1997</b> , 769, 245-55	3.7	10
13	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> , <b>2008</b> , 457, 185-95	4.6	9
12	Macroscopic and single-channel chloride currents in neuropile glial cells of the leech central nervous system. <i>Brain Research</i> , <b>1998</b> , 781, 307-19	3.7	8
11	Towards a consensus on developmental regression. <i>Neuroscience and Biobehavioral Reviews</i> , <b>2019</b> , 107, 3-5	9	7
10	Sulfhydryl oxidation: a potential strategy to achieve neuroprotection during severe hypoxia?. <i>Neuroscience</i> , <b>2008</b> , 152, 903-12	3.9	7
9	Single ion channel currents in neuropile glial cells of the leech central nervous system. <i>Glia</i> , <b>1993</b> , 9, 260-8	3.7	5
8	Restraint Stress Intensifies Interstitial K(+) Accumulation during Severe Hypoxia. <i>Frontiers in Pharmacology</i> , <b>2012</b> , 3, 53	5.6	4
7	Overshooting Subcellular Redox-Responses in Rett-Mouse Hippocampus during Neurotransmitter Stimulation. <i>Cells</i> , <b>2020</b> , 9,	7.9	3
6	Live Imaging of Mitochondrial ROS Production and Dynamic Redox Balance in Neurons. <i>Neuromethods</i> , <b>2017</b> , 179-197	0.4	2
5	Intensified mitochondrial hydrogen peroxide release occurs in all brain regions, affects male as well as female Rett mice, and constitutes a life-long burden. <i>Archives of Biochemistry and Biophysics</i> , <b>2020</b> , 696, 108666	4.1	2
4	Metabolomic Fingerprint of Mecp2-Deficient Mouse Cortex: Evidence for a Pronounced Multi-Faceted Metabolic Component in Rett Syndrome. <i>Cells</i> , <b>2021</b> , 10,	7.9	2

3	The Critical Role of Spreading Depolarizations in Early Brain Injury: Consensus and Contention.. <i>Neurocritical Care</i> , <b>2022</b> , 1	3-3	2
2	Questioning Glutamate Excitotoxicity in Acute Brain Damage: The Importance of Spreading Depolarization.. <i>Neurocritical Care</i> , <b>2022</b> , 1	3-3	2
1	Selective expression of a constitutively active erythropoietin receptor in GABAergic neurons alters hippocampal network properties without affecting cognition. <i>Journal of Neurochemistry</i> , <b>2016</b> , 136, 698-705	6	1