Michelle L Olsen

List of Publications by Year
in descending order

41 papers	2,793 citations	257357 24 h-index	289141 40 g-index
45 all docs	45 docs citations	45 times ranked	3675 citing authors

#	Article	IF	Citations
1	Astrocyte Kir4.1 ion channel deficits contribute to neuronal dysfunction in Huntington's disease model mice. Nature Neuroscience, 2014, 17, 694-703.	7.1	486
2	Functional implications for Kir4.1 channels in glial biology: from K⁺ buffering to cell differentiation. Journal of Neurochemistry, 2008, 107, 589-601.	2.1	274
3	Methyl-CpG-binding protein 2(MECP2) mutation type is associated with disease severity in Rett syndrome. Journal of Medical Genetics, 2014, 51, 152-158.	1.5	246
4	The role of glial-specific Kir4.1 in normal and pathological states of the CNS. Acta Neuropathologica, 2016, 132, 1-21.	3.9	171
5	New Insights on Astrocyte Ion Channels: Critical for Homeostasis and Neuron-Glia Signaling. Journal of Neuroscience, 2015, 35, 13827-13835.	1.7	161
6	Expression of Voltage-Gated Chloride Channels in Human Glioma Cells. Journal of Neuroscience, 2003, 23, 5572-5582.	1.7	152
7	Functional expression of Kir4.1 channels in spinal cord astrocytes. Glia, 2006, 53, 516-528.	2.5	103
8	Astrocyte morphogenesis is dependent on BDNF signaling via astrocytic TrkB.T1. ELife, 2019, 8, .	2.8	102
9	ClC3 Is a Critical Regulator of the Cell Cycle in Normal and Malignant Glial Cells. Journal of Neuroscience, 2008, 28, 9205-9217.	1.7	100
10	Mislocalization of Kir channels in malignant glia. Glia, 2004, 46, 63-73.	2.5	93
11	BK Channels Are Linked to Inositol 1,4,5-Triphosphate Receptors via Lipid Rafts. Journal of Biological Chemistry, 2007, 282, 31558-31568.	1.6	84
12	Differential Distribution of Kir4.1 in Spinal Cord Astrocytes Suggests Regional Differences in K+ Homeostasis. Journal of Neurophysiology, 2007, 98, 786-793.	0.9	80
13	RNA sequencing and proteomics approaches reveal novel deficits in the cortex of Mecp2-deficient mice, a model for Rett syndrome. Molecular Autism, 2017, 8, 56.	2.6	75
14	Novel Applications of Magnetic Cell Sorting to Analyze Cell-Type Specific Gene and Protein Expression in the Central Nervous System. PLoS ONE, 2016, 11, e0150290.	1.1	74
15	Spinal cord injury causes a wide-spread, persistent loss of Kir4.1 and glutamate transporter 1: benefit of 17Â-oestradiol treatment. Brain, 2010, 133, 1013-1025.	3.7	68
16	DNA methylation functions as a critical regulator of Kir4.1 expression during CNS development. Glia, 2014, 62, 411-427.	2.5	50
17	The Î±2Î²2 isoform combination dominates the astrocytic Na⁺/K⁺-ATPase activity and is rendered nonfunctional by the Î±2.G301R familial hemiplegic migraine type 2-associated mutation. Glia, 2017, 65, 1777-1793.	2.5	46
18	Magnetic Cell Sorting for In Vivo and In Vitro Astrocyte, Neuron, and Microglia Analysis. Current Protocols in Neuroscience, 2019, 88, e71.	2.6	44

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19	A closer look at astrocyte morphology: Development, heterogeneity, and plasticity at astrocyte leaflets. Current Opinion in Neurobiology, 2022, 74, 102550.	2.0	35
20	Glial Dysfunction in MeCP2 Deficiency Models: Implications for Rett Syndrome. International Journal of Molecular Sciences, 2019, 20, 3813.	1.8	33
21	Functional changes in glutamate transporters and astrocyte biophysical properties in a rodent model of focal cortical dysplasia. Frontiers in Cellular Neuroscience, 2014, 8, 425.	1.8	31
22	MeCP2 deficiency results in robust Rett-like behavioural and motor deficits in male and female rats. Human Molecular Genetics, 2016, 25, 3303-3320.	1.4	30
23	Examining Potassium Channel Function in Astrocytes. Methods in Molecular Biology, 2012, 814, 265-281.	0.4	29
24	Development and Validation of Fluorescence-Based and Automated Patch Clampâ€“Based Functional Assays for the Inward Rectifier Potassium Channel Kir4.1. Assay and Drug Development Technologies, 2013, 11, 532-543.	0.6	28
25	MeCP2 Deficiency Leads to Loss of Glial Kir4.1. ENeuro, 2018, 5, ENEURO.0194-17.2018.	0.9	26
26	Elevated GFAP induces astrocyte dysfunction in caudal brain regions: A potential mechanism for hindbrain involved symptoms in type II Alexander disease. Glia, 2015, 63, 2285-2297.	2.5	24
27	Acute Increases in Protein O-GlcNAcylation Dampen Epileptiform Activity in Hippocampus. Journal of Neuroscience, 2017, 37, 8207-8215.	1.7	24
28	Modulation of glioma BK channels via erbB2. Journal of Neuroscience Research, 2005, 81, 179-189.	1.3	23
29	K ir 5. 1â€dependent CO 2 /H + â€sensitive currents contribute to astrocyte heterogeneity across brain regions. Glia, 2021, 69, 310-325.	2.5	15
30	APâ€1 and the injury response of the GFAP gene. Journal of Neuroscience Research, 2019, 97, 149-161.	1.3	11
31	Adenosine Signaling through A1 Receptors Inhibits Chemosensitive Neurons in the Retrotrapezoid Nucleus. ENeuro, 2018, 5, ENEURO.0404-18.2018.	0.9	11
32	DNA methylation: A mechanism for sustained alteration of KIR4.1 expression following central nervous system insult. Glia, 2020, 68, 1495-1512.	2.5	10
33	Whole-Cell Patch-Clamp Recordings. Neuromethods, 2007, , 35-68.	0.2	9
34	Putative Roles of Astrocytes in General Anesthesia. Current Neuropharmacology, 2022, 20, 5-15.	1.4	9
35	Microbial community changes in a female rat model of Rett syndrome. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2021, 109, 110259.	2.5	7
36	Correlating Gene-specific DNA Methylation Changes with Expression and Transcriptional Activity of Astrocytic KCNJ10 (Kir4.1). Journal of Visualized Experiments, 2015, , .	0.2	6

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37	Isoflurane inhibits a Kir4.1/5.1-like conductance in neonatal rat brainstem astrocytes and recombinant Kir4.1/5.1 channels in a heterologous expression system. Journal of Neurophysiology, 2020, 124, 740-749.	0.9	6
38	MeCP2 in the regulation of neural activity: Rett syndrome pathophysiological perspectives. Degenerative Neurological and Neuromuscular Disease, 2015, 5, 103.	0.7	5
39	Metabolic Enzyme Alterations and Astrocyte Dysfunction in a Murine Model of Alexander Disease With Severe Reactive Gliosis. Molecular and Cellular Proteomics, 2022, 21, 100180.	2.5	3
40	Voltage-Activated Ion Channels in Glial Cells. , 2004, , 112-130.		2
41	Glial SIK3: A central player in ion and volume homeostasis in Drosophila peripheral nerves. Journal of Cell Biology, 2019, 218, 3888-3889.	2.3	0