Wolfgang Walz

List of Publications by Year
in descending order

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68	4,226	117625	114465
papers	citations	34 h-index	63 g-index

70	70	70	2703
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Role of glial cells in the regulation of the brain ion microenvironment. Progress in Neurobiology, 1989, 33, 309-333.	5.7	436
2	Role of astrocytes in the clearance of excess extracellular potassium. Neurochemistry International, 2000, 36, 291-300.	3.8	396
3	Lactate release from cultured astrocytes and neurons: A comparison. Glia, 1988, 1, 366-370.	4.9	260
4	Functional interactions between neurons and astrocytes. II. Potassium homeostasis at the cellular level. Progress in Neurobiology, 1983, 20, 133-183.	5.7	245
5	Carrier-mediated KCl accumulation accompanied by water movements is involved in the control of physiological K+ levels by astrocytes. Brain Research, 1985, 343, 44-51.	2.2	137
6	Ouabain-Sensitive and Ouabain-Resistant Net Uptake of Potassium into Astrocytes and Neurons in Primary Cultures. Journal of Neurochemistry, 1982, 39, 70-77.	3.9	134
7	Controversy surrounding the existence of discrete functional classes of astrocytes in adult gray matter. Glia, 2000, 31, 95-103.	4.9	130
8	Astrocytes in primary cultures: Membrane potential characteristics reveal exclusive potassium conductance and potassium accumulator properties. Brain Research, 1984, 292, 367-374.	2.2	126
9	Potassium homeostasis in the ischemic brain. Glia, 2005, 50, 407-416.	4.9	122
10	Immunocytochemical evidence for a distinct GFAP-negative subpopulation of astrocytes in the adult rat hippocampus. Neuroscience Letters, 1998, 257, 127-130.	2.1	121
11	Swelling and potassium uptake in cultured astrocytes. Canadian Journal of Physiology and Pharmacology, 1987, 65, 1051-1057.	1.4	109
12	Lactate production and release in cultured astrocytes. Neuroscience Letters, 1988, 86, 296-300.	2.1	107
13	Intense Furosemide-Sensitive Potassium Accumulation in Astrocytes in the Presence of Pathologically High Extracellular Potassium Levels. Journal of Cerebral Blood Flow and Metabolism, 1984, 4, 301-304.	4.3	85
14	Gene Expression of Aromatic l-Amino Acid Decarboxylase in Cultured Rat Glial Cells. Journal of Neurochemistry, 1992, 59, 1172-1175.	3.9	72
15	Chloride/anion channels in glial cell membranes. Glia, 2002, 40, 1-10.	4.9	72
16	Anoxia-Induced Changes in Extracellular K+ and pH in Mammalian Central White Matter. Journal of Cerebral Blood Flow and Metabolism, 1992, 12, 593-602.	4.3	69
17	The Initiation of the Microglial Response. Brain Pathology, 2000, 10, 137-143.	4.1	69
18	Electrophysiological properties of glial cells: comparison of brain slices with primary cultures. Brain Research, 1988, 443, 321-324.	2.2	67

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19	Role of Na/K/Cl cotransport in astrocytes. Canadian Journal of Physiology and Pharmacology, 1992, 70, S260-S262.	1.4	64
20	Ionic mechanism of a hyperpolarizing 5-hydroxytryptamine effect on leech neuropile glial cells. Brain Research, 1982, 250, 111-121.	2.2	63
21	A transmembrane sodium cycle in astrocytes. Brain Research, 1986, 368, 226-232.	2.2	63
22	Decarboxylation ofl-Dopa by cultured mouse astrocytes. Brain Research, 1993, 626, 306-309.	2.2	63
23	Differences in cation transport properties of primary astrocyte cultures from mouse and rat brain. Brain Research, 1985, 340, 333-340.	2.2	62
24	Prolonged Adenosine A1 Receptor Activation in Hypoxia and Pial Vessel Disruption Focal Cortical Ischemia Facilitates Clathrin-Mediated AMPA Receptor Endocytosis and Long-Lasting Synaptic Inhibition in Rat Hippocampal CA3-CA1 Synapses: Differential Regulation of GluA2 and GluA1 Subunits by p38 MAPK and JNK. Journal of Neuroscience, 2014, 34, 9621-9643.	3.6	54
25	Simulation of aspects of ischemia in cell culture: Changes in lactate compartmentation. Glia, 1990, 3, 522-528.	4.9	52
26	Glial Swelling in Ischemia: A Hypothesis. Developmental Neuroscience, 1993, 15, 216-225.	2.0	51
27	Comparison between fluxes of potassium and of chloride in astrocytes in primary cultures. Brain Research, 1983, 277, 321-328.	2.2	49
28	Mechanism of rapid K+-induced swelling of mouse astrocytes. Neuroscience Letters, 1992, 135, 243-246.	2.1	48
29	KCl movements during potassium-induced cytotoxic swelling of cultured astrocytes. Experimental Neurology, 1988, 99, 17-29.	4.1	47
30	Intracellular chloride modulates A-type potassium currents in astrocytes. Glia, 2002, 39, 207-216.	4.9	47
31	Vimentin-expressing proximal reactive astrocytes correlate with migration rather than proliferation following focal brain injury. Brain Research, 2004, 1024, 193-202.	2.2	47
32	pH shifts evoked by neuronal stimulation in slices of rat hippocampus. Canadian Journal of Physiology and Pharmacology, 1989, 67, 577-581.	1.4	41
33	Independent mechanisms of potassium clearance by astrocytes in gliotic tissue. Journal of Neuroscience Research, 1999, 56, 595-603.	2.9	41
34	External ions and membrane potential of leech neuropile glial cells. Brain Research, 1982, 239, 119-138.	2.2	40
35	Sodium- and bicarbonate-independent regulation of intracellular pH in cultured mouse astrocytes. Neuroscience Letters, 1990, 117, 105-110.	2.1	32
36	Complex Expression and Localization of Inactivating Kv Channels in Cultured Hippocampal Astrocytes. Journal of Neurophysiology, 2005, 93, 1699-1709.	1.8	31

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37	GABAA receptor agonists modulate K+ currents in adult hippocampal glial cells in situ. Glia, 1999, 26, 129-138.	4.9	30
38	pCLCA1 becomes a cAMP-dependent chloride conductance mediator in Caco-2 cells. Biochemical and Biophysical Research Communications, 2002, 298, 531-536.	2.1	30
39	Neutrophil Infiltration and Matrix Metalloproteinase-9 in Lacunar Infarction. Neurochemical Research, 2017, 42, 2560-2565.	3.3	30
40	Regulation of the Brain Microenvironment: Transmitters and Ions. , 1993, , 193-228.		30
41	Evidence for Chloride Ions as Intracellular Messenger Substances in Astrocytes. Journal of Neurophysiology, 1999, 82, 248-254.	1.8	29
42	Resistance of astrocyte electrical membrane properties to acidosis changes in the presence of lactate. Brain Research, 1989, 504, 82-86.	2.2	27
43	pCLCA1 lacks inherent chloride channel activity in an epithelial colon carcinoma cell line. American Journal of Physiology - Renal Physiology, 2004, 287, G33-G41.	3.4	27
44	Unusual topographical pattern of proximal astrogliosis around a cortical devascularizing lesion. Journal of Neuroscience Research, 2003, 73, 497-506.	2.9	26
45	Calcium entry into cultured mouse astrocytes. Neuroscience Letters, 1986, 67, 301-306.	2.1	25
46	Minocycline treatment prevents cavitation in rats after a cortical devascularizing lesion. Brain Research, 2006, 1090, 172-181.	2.2	25
47	Do neuronal signals regulate potassium flow in glial cells? Evidence from an invertebrate central nervous system. Journal of Neuroscience Research, 1982, 7, 71-79.	2.9	24
48	Role of Astrocytes in the Spreading Depression Signal Between Ischemic Core and Penumbra. Neuroscience and Biobehavioral Reviews, 1997, 21, 135-142.	6.1	24
49	Fluorescence marking of neuropile glial cells in the central nervous system of the leech Hirudo medicinalis. Cell and Tissue Research, 1980, 209, 257-69.	2.9	23
50	Ion channels in cultured microglia. Microscopy Research and Technique, 2001, 54, 26-33.	2.2	21
51	Inhibition of Brain Swelling after Ischemia-Reperfusion byÎ²-Adrenergic Antagonists: Correlation with Increased K⁺and Decreased Ca²⁺Concentrations in Extracellular Fluid. BioMed Research International, 2014, 2014, 1-10.	1.9	20
52	Electrophysiology of Neuropil Glial Cells in the Central Nervous System of The Leech: A Model System for Potassium Homeostasis in the Brain. Advances in Cellular Neurobiology, 1984, 5, 143-175.	1.0	17
53	The Na+-K+ pump in neuropile glial cells of the medicinal leech. Brain Research, 1983, 267, 93-100.	2.2	16
54	Acute and chronic effects of lithium in therapeutically relevant concentrations on potassium uptake into astrocytes. Psychopharmacology, 1982, 78, 309-313.	3.1	15

#	Article	IF	Citations
55	Culture environment and channel-mediated potassium fluxes in astrocytes. Brain Research, 1987, 412, 405-408.	2.2	15
56	Barium-Sensitive Potassium Channels in Astrocytes: Properties and Contribution to the Membrane Input Conductance. Annals of the New York Academy of Sciences, 1986, 481, 386-389.	3.8	13
57	Lithium-potassium interaction in acutely treated cortical neurons and astrocytes. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 1983, 7, 697-702.	4.8	12
58	Ion Transport and Volume Measurements in Cell Cultures. , 1988, , 441-492.		12
59	Doublecortinâ€expressing cells in the ischemic penumbra of a smallâ€vessel stroke. Journal of Neuroscience Research, 2008, 86, 883-893.	2.9	12
60	The Need for Animal Models in Small-Vessel Brain Disease. Critical Reviews in Neurobiology, 2006, 18, 5-11.	3.1	11
61	Short-circuiting effects of K+ currents on electrical responses of type-1-like astrocytes from mouse cerebral cortex. Brain Research, 1991, 567, 120-126.	2.2	10
62	Potassium homeostasis in the brain at the organ and cell level. Advances in Molecular and Cell Biology, 2003, 31, 595-609.	0.1	9
63	Involvement of matrix metalloproteinasesâ€2 and â€9 in the formation of a lacunaâ€like cerebral cavity. Journal of Neuroscience Research, 2013, 91, 920-933.	2.9	7
64	Perforated Patch-Clamp Technique. , 1995, , 155-172.		6
65	Coupling of metabolism and electrical activity in cortical astrocytes. Canadian Journal of Physiology and Pharmacology, 1992, 70, S176-S180.	1.4	5
66	Spreading Depression Waves as Mediators of Secondary Injury and of Protective Mechanisms. , 1999, , 35-44.		3
67	Occurrence of phenolsulfotransferase in primary glial culture cells of rat. Neurochemical Research, 1985, 10, 983-992.	3.3	2
68	The Impact of Extracellular Potassium Accumulation in Stroke. , 2012, , 363-372.		0