

Christine R Rose

List of Publications by Year in descending order

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84
papers

5,733
citations

94433

37
h-index

85541

71
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92
all docs

92
docs citations

92
times ranked

5575
citing authors

#	ARTICLE	IF	CITATIONS
1	Reactive astrocyte nomenclature, definitions, and future directions. <i>Nature Neuroscience</i> , 2021, 24, 312-325.	14.8	1,098
2	pH regulation and proton signalling by glial cells. <i>Progress in Neurobiology</i> , 1996, 48, 73-103.	5.7	289
3	Neuron-glia communication via EphA4/ephrin-A3 modulates LTP through glial glutamate transport. <i>Nature Neuroscience</i> , 2009, 12, 1285-1292.	14.8	258
4	Stores Not Just for Storage. <i>Neuron</i> , 2001, 31, 519-522.	8.1	210
5	Intracellular sodium homeostasis in rat hippocampal astrocytes. <i>Journal of Physiology</i> , 1996, 491, 291-305.	2.9	172
6	Calbindin in Cerebellar Purkinje Cells Is a Critical Determinant of the Precision of Motor Coordination. <i>Journal of Neuroscience</i> , 2003, 23, 3469-3477.	3.6	158
7	NMDA Receptor-Mediated Na ⁺ Signals in Spines and Dendrites. <i>Journal of Neuroscience</i> , 2001, 21, 4207-4214.	3.6	155
8	Astroglial Glutamate Signaling and Uptake in the Hippocampus. <i>Frontiers in Molecular Neuroscience</i> , 2017, 10, 451.	2.9	148
9	Synaptically induced sodium signals in hippocampal astrocytes <i>in situ</i> . <i>Journal of Physiology</i> , 2009, 587, 5859-5877.	2.9	136
10	Cotransporter-mediated water transport underlying cerebrospinal fluid formation. <i>Nature Communications</i> , 2018, 9, 2167.	12.8	135
11	Properties of the new fluorescent Na ⁺ indicator CoroNa Green: Comparison with SBFI and confocal Na ⁺ imaging. <i>Journal of Neuroscience Methods</i> , 2006, 155, 251-259.	2.5	132
12	Regulation of intracellular sodium in cultured rat hippocampal neurones. <i>Journal of Physiology</i> , 1997, 499, 573-587.	2.9	131
13	Principles of sodium homeostasis and sodium signalling in astroglia. <i>Glia</i> , 2016, 64, 1611-1627.	4.9	123
14	Gap junctions equalize intracellular Na ⁺ concentration in astrocytes. <i>Glia</i> , 1997, 20, 299-307.		122
15	Developmental profile and mechanisms of GABA-induced calcium signaling in hippocampal astrocytes. <i>Glia</i> , 2008, 56, 1127-1137.	4.9	120
16	Gap junctions mediate intercellular spread of sodium between hippocampal astrocytes <i>in situ</i> . <i>Glia</i> , 2012, 60, 239-252.	4.9	112
17	Mechanisms of H ⁺ and Na ⁺ Changes Induced by Glutamate, Kainate, and d-Aspartate in Rat Hippocampal Astrocytes. <i>Journal of Neuroscience</i> , 1996, 16, 5393-5404.	3.6	106
18	Effects of Glucose Deprivation, Chemical Hypoxia, and Simulated Ischemia on Na ⁺ Homeostasis in Rat Spinal Cord Astrocytes. <i>Journal of Neuroscience</i> , 1998, 18, 3554-3562.	3.6	102

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19	Two sides of the same coin: Sodium homeostasis and signaling in astrocytes under physiological and pathophysiological conditions. <i>Glia</i> , 2013, 61, 1191-1205.	4.9	94
20	K ⁺ -induced reversal of astrocyte glutamate uptake is limited by compensatory changes in intracellular Na ⁺ . <i>Neuroscience</i> , 1999, 93, 285-292.	2.3	85
21	Ion changes and signalling in perisynaptic glia. <i>Brain Research Reviews</i> , 2010, 63, 113-129.	9.0	85
22	Epithelial Sodium Channel Regulates Adult Neural Stem Cell Proliferation in a Flow-Dependent Manner. <i>Cell Stem Cell</i> , 2018, 22, 865-878.e8.	11.1	81
23	Molecular and cellular physiology of sodium-dependent glutamate transporters. <i>Brain Research Bulletin</i> , 2018, 136, 3-16.	3.0	74
24	Ammonium-evoked alterations in intracellular sodium and pH reduce glial glutamate transport activity. <i>Glia</i> , 2009, 57, 921-934.	4.9	73
25	Glutamate transporter-associated anion channels adjust intracellular chloride concentrations during glial maturation. <i>Glia</i> , 2017, 65, 388-400.	4.9	71
26	Sodium signals in cerebellar Purkinje neurons and Bergmann glial cells evoked by glutamatergic synaptic transmission. <i>Glia</i> , 2008, 56, 1138-1149.	4.9	65
27	Astrocytes restrict discharge duration and neuronal sodium loads during recurrent network activity. <i>Glia</i> , 2015, 63, 936-957.	4.9	64
28	On the special role of NCX in astrocytes: Translating Na ⁺ -transients into intracellular Ca ²⁺ signals. <i>Cell Calcium</i> , 2020, 86, 102154.	2.4	61
29	Two-photon Na ⁺ imaging in spines and fine dendrites of central neurons. <i>Pflugers Archiv European Journal of Physiology</i> , 1999, 439, 201-207.	2.8	60
30	Astrocyte sodium signaling and neuro-metabolic coupling in the brain. <i>Neuroscience</i> , 2016, 323, 121-134.	2.3	56
31	Rapid sodium signaling couples glutamate uptake to breakdown of ATP in perivascular astrocyte endfeet. <i>Glia</i> , 2017, 65, 293-308.	4.9	53
32	Ammonium influx pathways into astrocytes and neurones of hippocampal slices. <i>Journal of Neurochemistry</i> , 2010, 115, 1123-1136.	3.9	52
33	Ionic signalling in astroglia beyond calcium. <i>Journal of Physiology</i> , 2020, 598, 1655-1670.	2.9	52
34	Laminar and subcellular heterogeneity of GLAST and GLT ₁ immunoreactivity in the developing postnatal mouse hippocampus. <i>Journal of Comparative Neurology</i> , 2014, 522, 204-224.	1.6	49
35	Heterogeneity of Activity-Induced Sodium Transients between Astrocytes of the Mouse Hippocampus and Neocortex: Mechanisms and Consequences. <i>Journal of Neuroscience</i> , 2019, 39, 2620-2634.	3.6	46
36	Reverse NCX Attenuates Cellular Sodium Loading in Metabolically Compromised Cortex. <i>Cerebral Cortex</i> , 2018, 28, 4264-4280.	2.9	44

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37	Kir4.1 channels mediate a depolarization of hippocampal astrocytes under hyperammonemic conditions <i>in situ</i> . <i>Glia</i> , 2012, 60, 965-978.	4.9	40
38	Na ⁺ -dependent transporters: The backbone of astroglial homeostatic function. <i>Cell Calcium</i> , 2020, 85, 102136.	2.4	40
39	Astrocyte calcium signals at Schaffer collateral to CA1 pyramidal cell synapses correlate with the number of activated synapses but not with synaptic strength. <i>Hippocampus</i> , 2012, 22, 29-42.	1.9	37
40	Roles of astrocytic Na ⁺ , K ⁺ -ATPase and glycogenolysis for K ⁺ homeostasis in mammalian brain. <i>Journal of Neuroscience Research</i> , 2015, 93, 1019-1030.	2.9	36
41	Relation between activity-induced intracellular sodium transients and ATP dynamics in mouse hippocampal neurons. <i>Journal of Physiology</i> , 2019, 597, 5687-5705.	2.9	35
42	Dysbalance of Astrocyte Calcium under Hyperammonemic Conditions. <i>PLoS ONE</i> , 2014, 9, e105832.	2.5	35
43	Differential effects of energy deprivation on intracellular sodium homeostasis in neurons and astrocytes. <i>Journal of Neuroscience Research</i> , 2017, 95, 2275-2285.	2.9	33
44	BDE-47 and 6-OH-BDE-47 modulate calcium homeostasis in primary fetal human neural progenitor cells via ryanodine receptor-independent mechanisms. <i>Archives of Toxicology</i> , 2014, 88, 1537-1548.	4.2	32
45	Extrusion versus diffusion: mechanisms for recovery from sodium loads in mouse CA1 pyramidal neurons. <i>Journal of Physiology</i> , 2016, 594, 5507-5527.	2.9	27
46	Exacerbation of Epilepsy by Astrocyte Alkalization and Gap Junction Uncoupling. <i>Journal of Neuroscience</i> , 2021, 41, 2106-2118.	3.6	27
47	FRET-based imaging of intracellular ATP in organotypic brain slices. <i>Journal of Neuroscience Research</i> , 2019, 97, 933-945.	2.9	24
48	Dysregulation of Astrocyte Ion Homeostasis and Its Relevance for Stroke-Induced Brain Damage. <i>International Journal of Molecular Sciences</i> , 2021, 22, 5679.	4.1	24
49	Changes in the proliferative capacity of NG2 cell subpopulations during postnatal development of the mouse hippocampus. <i>Brain Structure and Function</i> , 2017, 222, 831-847.	2.3	23
50	Sodium Fluctuations in Astroglia and Their Potential Impact on Astrocyte Function. <i>Frontiers in Physiology</i> , 2020, 11, 871.	2.8	23
51	Quantitative Imaging of Changes in Astrocytic and Neuronal Adenosine Triphosphate Using Two Different Variants of ATeam. <i>Frontiers in Cellular Neuroscience</i> , 2020, 14, 80.	3.7	21
52	Pharmacological Characterization of Na ⁺ Influx via Voltage-Gated Na ⁺ Channels in Spinal Cord Astrocytes. <i>Journal of Neurophysiology</i> , 1997, 78, 3249-3258.	1.8	20
53	Glial Chloride Homeostasis Under Transient Ischemic Stress. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 735300.	3.7	20
54	Functional anisotropic panglial networks in the lateral superior olive. <i>Glia</i> , 2016, 64, 1892-1911.	4.9	19

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55	Bmal1 deficiency affects glial synaptic coverage of the hippocampal mossy fiber synapse and the actin cytoskeleton in astrocytes. <i>Glia</i> , 2020, 68, 947-962.	4.9	19
56	CrossTalk opposing view: NKCC1 in the luminal membrane of choroid plexus is outwardly directed under basal conditions and contributes directly to cerebrospinal fluid secretion. <i>Journal of Physiology</i> , 2020, 598, 4737-4739.	2.9	19
57	Lesion-Induced Alterations in Astrocyte Glutamate Transporter Expression and Function in the Hippocampus. <i>ISRN Neurology</i> , 2013, 2013, 1-16.	1.5	17
58	Astrocyte Sodium Signalling and Panglial Spread of Sodium Signals in Brain White Matter. <i>Neurochemical Research</i> , 2017, 42, 2505-2518.	3.3	15
59	Astrocytes of the early postnatal brain. <i>European Journal of Neuroscience</i> , 2021, 54, 5649-5672.	2.6	15
60	Acetazolamide modulates intracranial pressure directly by its action on the cerebrospinal fluid secretion apparatus. <i>Fluids and Barriers of the CNS</i> , 2022, 19, .	5.0	15
61	Two-Photon Na ⁺ Imaging Reports Somatically Evoked Action Potentials in Rat Olfactory Bulb Mitral and Granule Cell Neurites. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 50.	3.7	14
62	Ion dynamics at the energy-deprived tripartite synapse. <i>PLoS Computational Biology</i> , 2021, 17, e1009019.	3.2	14
63	Quantitative determination of cellular [Na ⁺] by fluorescence lifetime imaging with CoroNaGreen. <i>Journal of General Physiology</i> , 2019, 151, 1319-1331.	1.9	13
64	Two-Photon Sodium Imaging in Dendritic Spines. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot072074.	0.3	12
65	Exciting glial oscillations. <i>Nature Neuroscience</i> , 2001, 4, 773-774.	14.8	11
66	Lactate rescues neuronal sodium homeostasis during impaired energy metabolism. <i>Channels</i> , 2015, 9, 200-208.	2.8	11
67	High-resolution Na ⁺ imaging in dendrites and spines. <i>Pflugers Archiv European Journal of Physiology</i> , 2003, 446, 317-321.	2.8	10
68	Glial ionic excitability: The role for sodium. <i>Glia</i> , 2016, 64, 1609-1610.	4.9	10
69	Disruption of Glutamate Transport and Homeostasis by Acute Metabolic Stress. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 637784.	3.7	10
70	Spontaneous Ultraslow Na ⁺ Fluctuations in the Neonatal Mouse Brain. <i>Cells</i> , 2020, 9, 102.	4.1	9
71	Rapid Fluorescence Lifetime Imaging Reveals That TRPV4 Channels Promote Dysregulation of Neuronal Na ⁺ in Ischemia. <i>Journal of Neuroscience</i> , 2022, 42, 552-566.	3.6	8
72	Anisotropic Panglial Coupling Reflects Tonotopic Organization in the Inferior Colliculus. <i>Frontiers in Cellular Neuroscience</i> , 2018, 12, 431.	3.7	7

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73	Changes in Astroglial K ⁺ upon Brief Periods of Energy Deprivation in the Mouse Neocortex. International Journal of Molecular Sciences, 2022, 23, 4836.	4.1	7
74	Action Potential Firing Induces Sodium Transients in Macroglial Cells of the Mouse Corpus Callosum. Neuroglia (Basel, Switzerland), 2018, 1, 106-125.	0.9	6
75	Rebuttal from Nanna MacAulay and Christine R. Rose. Journal of Physiology, 2020, 598, 4743-4743.	2.9	6
76	Multi-photon Intracellular Sodium Imaging Combined with UV-mediated Focal Uncaging of Glutamate in CA1 Pyramidal Neurons. Journal of Visualized Experiments, 2014, , e52038.	0.3	5
77	Glial heterogeneity: the increasing complexity of the brain. E-Neuroforum, 2015, 6, 59-62.	0.1	5
78	Imaging of Local and Global Sodium Signals in Astrocytes. Methods in Molecular Biology, 2019, 1938, 187-202.	0.9	5
79	AAV-Mediated CRISPRi and RNAi Based Gene Silencing in Mouse Hippocampal Neurons. Cells, 2021, 10, 324.	4.1	5
80	Imaging of Intracellular ATP in Organotypic Tissue Slices of the Mouse Brain using the FRET-based Sensor ATeam1.03⁺;YEMK⁺. Journal of Visualized Experiments, 2019, , .	0.3	4
81	Altered Gap Junction Network Topography in Mouse Models for Human Hereditary Deafness. International Journal of Molecular Sciences, 2020, 21, 7376.	4.1	4
82	Local Postsynaptic Signaling on Slow Time Scales in Reciprocal Olfactory Bulb Granule Cell Spines Matches Asynchronous Release. Frontiers in Synaptic Neuroscience, 2020, 12, 551691.	2.5	1
83	Sodium Signals and Their Significance for Axonal Function. , 2010, , 35-53.		1
84	On the origin of ultraslow spontaneous Na⁺ fluctuations in neurons of the neonatal forebrain. Journal of Neurophysiology, 2021, 125, 408-425.	1.8	0