L Felipe Barros

List of Publications by Year
in descending order

59 papers	4,600 citations	94433 37 h-index	138484 58 g-index
63 all docs	63 docs citations	63 times ranked	5123 citing authors

#	Article	IF	Citations
1	How expensive is the astrocyte?. Journal of Cerebral Blood Flow and Metabolism, 2022, 42, 738-745.	4.3	24
2	Visualizing physiological parameters in cells and tissues using genetically encoded indicators for metabolites. Free Radical Biology and Medicine, 2022, 182, 34-58.	2.9	14
3	CO2 signaling mediates neurovascular coupling in the cerebral cortex. Nature Communications, 2022, 13, 2125.	12.8	23
4	Aerobic Glycolysis in the Brain: Warburg and Crabtree Contra Pasteur. Neurochemical Research, 2021, 46, 15-22.	3.3	39
5	Bidirectional astrocytic <scp>GLUT1</scp> activation by elevated extracellular K⁺. Glia, 2021, 69, 1012-1021.	4.9	11
6	Energy metabolism in childhood neurodevelopmental disorders. EBioMedicine, 2021, 69, 103474.	6.1	23
7	Neuronal lactate levels depend on gliaâ€derived lactate during high brain activity in Drosophila. Glia, 2020, 68, 1213-1227.	4.9	24
8	Astrocytes regulate brain extracellular pH via a neuronal activity-dependent bicarbonate shuttle. Nature Communications, 2020, 11, 5073.	12.8	72
9	Fluid Brain Glycolysis: Limits, Speed, Location, Moonlighting, and the Fates of Glycogen and Lactate. Neurochemical Research, 2020, 45, 1328-1334.	3.3	14
10	Arousal-induced cortical activity triggers lactate release from astrocytes. Nature Metabolism, 2020, 2, 179-191.	11.9	82
11	A highly responsive pyruvate sensor reveals pathway-regulatory role of the mitochondrial pyruvate carrier MPC. ELife, 2020, 9, .	6.0	53
12	Monitoring Lactate Dynamics in Individual Macrophages with a Genetically Encoded Probe. Methods in Molecular Biology, 2020, 2184, 19-30.	0.9	1
13	MitoToxy assay: A novel cell-based method for the assessment of metabolic toxicity in a multiwell plate format using a lactate FRET nanosensor, Laconic. PLoS ONE, 2019, 14, e0224527.	2.5	12
14	Monocarboxylate transporter 4 (MCT4) is a high affinity transporter capable of exporting lactate in high-lactate microenvironments. Journal of Biological Chemistry, 2019, 294, 20135-20147.	3.4	115
15	Non-Canonical Control of Neuronal Energy Status by the Na+ Pump. Cell Metabolism, 2019, 29, 668-680.e4.	16.2	79
16	Tight coupling of astrocyte energy metabolism to synaptic activity revealed by genetically encoded FRET nanosensors in hippocampal tissue. Journal of Cerebral Blood Flow and Metabolism, 2019, 39, 513-523.	4.3	58
17	Perfect energy stability in neurons. Aging, 2019, 11, 6622-6623.	3.1	1
18	<scp>G</scp>lia in brain energy metabolism: <scp>A</scp> perspective. Glia, 2018, 66, 1134-1137.	4.9	53

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19	Neuronal control of astrocytic respiration through a variant of the Crabtree effect. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1623-1628.	7.1	48
20	Chaski, a novel Drosophila lactate/pyruvate transporter required in glia cells for survival under nutritional stress. Scientific Reports, 2018, 8, 1186.	3.3	38
21	CrossTalk proposal: an important astrocyteâ€toâ€neuron lactate shuttle couples neuronal activity to glucose utilisation in the brain. Journal of Physiology, 2018, 596, 347-350.	2.9	97
22	Rebuttal from L. F. Barros and B. Weber. Journal of Physiology, 2018, 596, 355-356.	2.9	3
23	Current technical approaches to brain energy metabolism. Glia, 2018, 66, 1138-1159.	4.9	40
24	Modulation of Mammary Stromal Cell Lactate Dynamics by Ambient Glucose and Epithelial Factors. Journal of Cellular Physiology, 2017, 232, 136-144.	4.1	8
25	Nearâ€critical GLUT1 and Neurodegeneration. Journal of Neuroscience Research, 2017, 95, 2267-2274.	2.9	28
26	Nanomolar nitric oxide concentrations quickly and reversibly modulate astrocytic energy metabolism. Journal of Biological Chemistry, 2017, 292, 9432-9438.	3.4	45
27	Sodium signaling and astrocyte energy metabolism. Glia, 2016, 64, 1667-1676.	4.9	61
28	Targeting of astrocytic glucose metabolism by beta-hydroxybutyrate. Journal of Cerebral Blood Flow and Metabolism, 2016, 36, 1813-1822.	4.3	54
29	InÂVivo Evidence for a Lactate Gradient from Astrocytes to Neurons. Cell Metabolism, 2016, 23, 94-102.	16.2	437
30	The Astrocyte: Powerhouse and Recycling Center. Cold Spring Harbor Perspectives in Biology, 2015, 7, a020396.	5.5	127
31	Channel-Mediated Lactate Release by K⁺-Stimulated Astrocytes. Journal of Neuroscience, 2015, 35, 4168-4178.	3.6	163
32	NH4+ triggers the release of astrocytic lactate via mitochondrial pyruvate shunting. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11090-11095.	7.1	67
33	How doth the little busy bee: unexpected metabolism. Trends in Neurosciences, 2015, 38, 1-2.	8.6	21
34	Functional interaction between bicarbonate transporters and carbonic anhydrase modulates lactate uptake into mouse cardiomyocytes. Pflugers Archiv European Journal of Physiology, 2015, 467, 1469-1480.	2.8	5
35	Single-cell imaging tools for brain energy metabolism: a review. Neurophotonics, 2014, 1, 011004.	3.3	52
36	Non-preferential fuelling of the Na+/K+-ATPase pump. Biochemical Journal, 2014, 460, 353-361.	3.7	36

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37	Higher Transport and Metabolism of Glucose in Astrocytes Compared with Neurons: A Multiphoton Study of Hippocampal and Cerebellar Tissue Slices. Cerebral Cortex, 2014, 24, 222-231.	2.9	91
38	Imaging Mitochondrial Flux in Single Cells with a FRET Sensor for Pyruvate. PLoS ONE, 2014, 9, e85780.	2.5	160
39	Metabolic signaling by lactate in the brain. Trends in Neurosciences, 2013, 36, 396-404.	8.6	271
40	Small is fast: astrocytic glucose and lactate metabolism at cellular resolution. Frontiers in Cellular Neuroscience, 2013, 7, 27.	3.7	51
41	A Genetically Encoded FRET Lactate Sensor and Its Use To Detect the Warburg Effect in Single Cancer Cells. PLoS ONE, 2013, 8, e57712.	2.5	291
42	Acute feedback control of astrocytic glycolysis by lactate. Glia, 2012, 60, 674-680.	4.9	40
43	Fast and Reversible Stimulation of Astrocytic Glycolysis by K⁺and a Delayed and Persistent Effect of Glutamate. Journal of Neuroscience, 2011, 31, 4709-4713.	3.6	157
44	NBCe1 Mediates the Acute Stimulation of Astrocytic Glycolysis by Extracellular K⁺. Journal of Neuroscience, 2011, 31, 14264-14271.	3.6	129
45	Glucose and lactate supply to the synapse. Brain Research Reviews, 2010, 63, 149-159.	9.0	139
46	High resolution measurement of the glycolytic rate. Frontiers in Neuroenergetics, 2010, 2, .	5.3	120
47	Preferential transport and metabolism of glucose in Bergmann glia over Purkinje cells: A multiphoton study of cerebellar slices. Glia, 2009, 57, 962-970.	4.9	69
48	Kinetic validation of 6â€NBDG as a probe for the glucose transporter GLUT1 in astrocytes. Journal of Neurochemistry, 2009, 109, 94-100.	3.9	65
49	An Enquiry into Metabolite Domains. Biophysical Journal, 2007, 92, 3878-3884.	0.5	49
50	A quantitative overview of glucose dynamics in the gliovascular unit. Glia, 2007, 55, 1222-1237.	4.9	111
51	Why glucose transport in the brain matters for PET. Trends in Neurosciences, 2005, 28, 117-119.	8.6	58
52	Glutamate Mediates Acute Glucose Transport Inhibition in Hippocampal Neurons. Journal of Neuroscience, 2004, 24, 9669-9673.	3.6	128
53	Apoptotic and necrotic blebs in epithelial cells display similar neck diameters but different kinase dependency. Cell Death and Differentiation, 2003, 10, 687-697.	11.2	141
54	Glutamate Triggers Rapid Glucose Transport Stimulation in Astrocytes as Evidenced by Real-Time Confocal Microscopy. Journal of Neuroscience, 2003, 23, 7337-7342.	3.6	221

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55	Ion movements in cell death: from protection to execution. Biological Research, 2002, 35, 209-14.	3.4	29
56	Hyperosmotic shock induces both activation and translocation of glucose transporters in mammalian cells. Pflugers Archiv European Journal of Physiology, 2001, 442, 614-621.	2.8	48
57	Nonselective cation channels as effectors of free radicalâ€“induced rat liver cell necrosis. Hepatology, 2001, 33, 114-122.	7.3	57
58	Necrotic volume increase and the early physiology of necrosis. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2001, 130, 401-409.	1.8	120
59	Measurement of sugar transport in single living cells. Pflugers Archiv European Journal of Physiology, 1999, 437, 763-770.	2.8	22