Gilles Bonvento

List of Publications by Year
in descending order

92 papers	7,374 citations	66343 42 h-index	62596 80 g-index
95 all docs	95 docs citations	95 times ranked	9243 citing authors

#	Article	IF	Citations
1	Glycolysis-derived L-serine levels versus PHGDH expression in Alzheimerâ€™s disease. Cell Metabolism, 2022, 34, 654-655.	16.2	4
2	l-Serine links metabolism with neurotransmission. Progress in Neurobiology, 2021, 197, 101896.	5.7	44
3	Reactive astrocyte nomenclature, definitions, and future directions. Nature Neuroscience, 2021, 24, 312-325.	14.8	1,098
4	Neuronal tau species transfer to astrocytes and induce their loss according to tau aggregation state. Brain, 2021, 144, 1167-1182.	7.6	27
5	The C-Terminal Domain of LRRK2 with the G2019S Substitution Increases Mutant A53T Î±-Synuclein Toxicity in Dopaminergic Neurons In Vivo. International Journal of Molecular Sciences, 2021, 22, 6760.	4.1	7
6	THY-Tau22 mouse model accumulates more tauopathy at late stage of the disease in response to microglia deactivation through TREM2 deficiency. Neurobiology of Disease, 2021, 155, 105398.	4.4	14
7	Astrocyte-neuron metabolic cooperation shapes brain activity. Cell Metabolism, 2021, 33, 1546-1564.	16.2	143
8	The C-terminal domain of LRRK2 with the G2019S mutation is sufficient to produce neurodegeneration of dopaminergic neurons in vivo. Neurobiology of Disease, 2020, 134, 104614.	4.4	15
9	Assessment of simplified methods for quantification of [18F]-DPA-714 using 3D whole-brain TSPO immunohistochemistry in a non-human primate. Journal of Cerebral Blood Flow and Metabolism, 2020, 40, 1103-1116.	4.3	4
10	STAT3-Mediated Astrocyte Reactivity Associated with Brain Metastasis Contributes to Neurovascular Dysfunction. Cancer Research, 2020, 80, 5642-5655.	0.9	18
11	Complex roles for reactive astrocytes in the triple transgenic mouse model of Alzheimer disease. Neurobiology of Aging, 2020, 90, 135-146.	3.1	23
12	Glucose metabolism links astroglial mitochondria to cannabinoid effects. Nature, 2020, 583, 603-608.	27.8	169
13	Impairment of Glycolysis-Derived l-Serine Production in Astrocytes Contributes to Cognitive Deficits in Alzheimerâ€™s Disease. Cell Metabolism, 2020, 31, 503-517.e8.	16.2	160
14	In Utero Electroporation of Multiaddressable Genome-Integrating Color (MAGIC) Markers to Individualize Cortical Mouse Astrocytes. Journal of Visualized Experiments, 2020, , .	0.3	2
15	Cortical astrocytes develop in a plastic manner at both clonal and cellular levels. Nature Communications, 2019, 10, 4884.	12.8	87
16	Astrocytic mitochondrial ROS modulate brain metabolism and mouse behaviour. Nature Metabolism, 2019, 1, 201-211.	11.9	119
17	Diffusion-weighted magnetic resonance spectroscopy enables cell-specific monitoring of astrocyte reactivity in vivo. NeuroImage, 2019, 191, 457-469.	4.2	42
18	A new statistical method to analyze Morris Water Maze data using Dirichlet distribution. F1000Research, 2019, 8, 1601.	1.6	8

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19	A new statistical method to analyze Morris Water Maze data using Dirichlet distribution. F1000Research, 2019, 8, 1601.	1.6	14
20	The striatal kinase DCLK3 produces neuroprotection against mutant huntingtin. Brain, 2018, 141, 1434-1454.	7.6	23
21	Fast Ca²⁺ responses in astrocyte endâ€feet and neurovascular coupling in mice. Glia, 2018, 66, 348-358.	4.9	53
22	Current technical approaches to brain energy metabolism. Glia, 2018, 66, 1138-1159.	4.9	40
23	A42â€…Reactive astrocytes promote proteostasis in huntingtonâ€™s disease. , 2018, , .		1
24	Modulation of astrocyte reactivity improves functional deficits in mouse models of Alzheimerâ€™s disease. Acta Neuropathologica Communications, 2018, 6, 104.	5.2	134
25	Supragranular Pyramidal Cells Exhibit Early Metabolic Alterations in the 3xTg-AD Mouse Model of Alzheimerâ€™s Disease. Frontiers in Cellular Neuroscience, 2018, 12, 216.	3.7	11
26	Imaging and spectroscopic approaches to probe brain energy metabolism dysregulation in neurodegenerative diseases. Journal of Cerebral Blood Flow and Metabolism, 2017, 37, 1927-1943.	4.3	24
27	A neuronal MCT2 knockdown in the rat somatosensory cortex reduces both the NMR lactate signal and the BOLD response during whisker stimulation. PLoS ONE, 2017, 12, e0174990.	2.5	42
28	Synaptic scaling up in medium spiny neurons of aged BACHD mice: A slow-progression model of Huntington's disease. Neurobiology of Disease, 2016, 86, 131-139.	4.4	27
29	Multifaceted roles for astrocytes in spreading depolarization: A target for limiting spreading depolarization in acute brain injury?. Glia, 2016, 64, 5-20.	4.9	56
30	Complex I assembly into supercomplexes determines differential mitochondrial ROS production in neurons and astrocytes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13063-13068.	7.1	300
31	New paradigm to assess brain cell morphology by diffusion-weighted MR spectroscopy in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6671-6676.	7.1	81
32	Ciliary neurotrophic factor (CNTF) activation of astrocytes decreases spreading depolarization susceptibility and increases potassium clearance. Glia, 2015, 63, 91-103.	4.9	24
33	The Neuroprotective Agent CNTF Decreases Neuronal Metabolites in the Rat Striatum: An <i>in Vivo</i> Multimodal Magnetic Resonance Imaging Study. Journal of Cerebral Blood Flow and Metabolism, 2015, 35, 917-921.	4.3	21
34	The JAK/STAT3 Pathway Is a Common Inducer of Astrocyte Reactivity in Alzheimer's and Huntington's Diseases. Journal of Neuroscience, 2015, 35, 2817-2829.	3.6	221
35	The striatal long noncoding RNA Abhd11os is neuroprotective against an N-terminal fragment of mutant huntingtin inÂvivo. Neurobiology of Aging, 2015, 36, 1601.e7-1601.e16.	3.1	34
36	Channel-Mediated Lactate Release by K⁺-Stimulated Astrocytes. Journal of Neuroscience, 2015, 35, 4168-4178.	3.6	163

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37	Loss of the thyroid hormone-binding protein Crym renders striatal neurons more vulnerable to mutant huntingtin in Huntington's disease. Human Molecular Genetics, 2015, 24, 1563-1573.	2.9	25
38	Impaired Brain Energy Metabolism in the BACHD Mouse Model of Huntington's Disease: Critical Role of Astrocyteâ€"Neuron Interactions. Journal of Cerebral Blood Flow and Metabolism, 2014, 34, 1500-1510.	4.3	50
39	Efficient gene delivery and selective transduction of astrocytes in the mammalian brain using viral vectors. Frontiers in Cellular Neuroscience, 2013, 7, 106.	3.7	44
40	Glucose and lactate metabolism in the awake and stimulated rat: a 13C-NMR study. Frontiers in Neuroenergetics, 2013, 5, 5.	5.3	36
41	Reactive Astrocytes Overexpress TSPO and Are Detected by TSPO Positron Emission Tomography Imaging. Journal of Neuroscience, 2012, 32, 10809-10818.	3.6	286
42	Capucin does not modify the toxicity of a mutant Huntingtin fragment in vivo. Neurobiology of Aging, 2012, 33, 1845.e5-1845.e6.	3.1	7
43	Alteration of sensory-evoked metabolic and oscillatory activities in the olfactory bulb of GLAST-deficient mice. Frontiers in Neural Circuits, 2012, 6, 1.	2.8	104
44	Plasticity of astroglial networks in olfactory glomeruli. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18442-18446.	7.1	111
45	Ciliary Neurotrophic Factor Protects Striatal Neurons against Excitotoxicity by Enhancing Glial Glutamate Uptake. PLoS ONE, 2010, 5, e8550.	2.5	38
46	In vivo expression of polyglutamine-expanded huntingtin by mouse striatal astrocytes impairs glutamate transport: a correlation with Huntington's disease subjects. Human Molecular Genetics, 2010, 19, 3053-3067.	2.9	282
47	Detection by voxel-wise statistical analysis of significant changes in regional cerebral glucose uptake in an APP/PS1 transgenic mouse model of Alzheimer's disease. NeuroImage, 2010, 51, 586-598.	4.2	43
48	Dopamine Gene Therapy for Parkinsonâ€™s Disease in a Nonhuman Primate Without Associated Dyskinesia. Science Translational Medicine, 2009, 1, 2ra4.	12.4	159
49	Principal Cell Spiking, Postsynaptic Excitation, and Oxygen Consumption in the Rat Cerebellar Cortex. Journal of Neurophysiology, 2009, 102, 1503-1512.	1.8	35
50	The Barrel Cortex as a Model to Study Dynamic Neuroglial Interaction. Neuroscientist, 2009, 15, 351-366.	3.5	25
51	Sustained effects of nonalleleâ€specific <i>Huntingtin</i> silencing. Annals of Neurology, 2009, 65, 276-285.	5.3	196
52	Engineered lentiviral vector targeting astrocytes <i>In vivo</i>. Glia, 2009, 57, 667-679.	4.9	136
53	Role of glutamate transporters in corticostriatal synaptic transmission. Neuroscience, 2009, 158, 1608-1615.	2.3	22
54	Targeted Activation of Astrocytes: A Potential Neuroprotective Strategy. Molecular Neurobiology, 2008, 38, 231-241.	4.0	103

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55	Glutamate receptorâ€dependent increments in lactate, glucose and oxygen metabolism evoked in rat cerebellum <i>in vivo</i>. Journal of Physiology, 2008, 586, 1337-1349.	2.9	101
56	Quantitative validation of voxel-wise statistical analyses of autoradiographic rat brain volumes: Application to unilateral visual stimulation. NeuroImage, 2008, 40, 482-494.	4.2	28
57	Activation of Astrocytes by CNTF Induces Metabolic Plasticity and Increases Resistance to Metabolic Insults. Journal of Neuroscience, 2007, 27, 7094-7104.	3.6	103
58	Automated Three-Dimensional Analysis of Histological and Autoradiographic Rat Brain Sections: Application to an Activation Study. Journal of Cerebral Blood Flow and Metabolism, 2007, 27, 1742-1755.	4.3	23
59	siRNA targeted against amyloid precursor protein impairs synaptic activity in vivo. Neurobiology of Aging, 2006, 27, 1740-1750.	3.1	47
60	Neuron?astrocyte interactions in the regulation of brain energy metabolism: a focus on NMR spectroscopy. Journal of Neurochemistry, 2006, 99, 393-401.	3.9	51
61	Brain mitochondrial defects amplify intracellular [Ca 2+] rise and neurodegeneration but not Ca 2+ entry during NMDA receptor activation. FASEB Journal, 2006, 20, 1021-1023.	0.5	63
62	Ciliary Neurotrophic Factor Activates Astrocytes, Redistributes Their Glutamate Transporters GLAST and GLT-1 to Raft Microdomains, and Improves Glutamate Handling In Vivo. Journal of Neuroscience, 2006, 26, 5978-5989.	3.6	79
63	Differential Effects of NMDA and AMPA Glutamate Receptors on Functional Magnetic Resonance Imaging Signals and Evoked Neuronal Activity during Forepaw Stimulation of the Rat. Journal of Neuroscience, 2006, 26, 8409-8416.	3.6	66
64	Decreased metabolic response to visual stimulation in the superior colliculus of mice lacking the glial glutamate transporter GLT-1. European Journal of Neuroscience, 2005, 22, 1807-1811.	2.6	19
65	The Astrocyteâ€”Neuron Lactate Shuttle: A Debated but still Valuable Hypothesis for Brain Imaging. Journal of Cerebral Blood Flow and Metabolism, 2005, 25, 1394-1399.	4.3	28
66	Glial Glutamate Transporters Mediate a Functional Metabolic Crosstalk between Neurons and Astrocytes in the Mouse Developing Cortex. Neuron, 2003, 37, 275-286.	8.1	259
67	Glial Glutamate Transporters and Maturation of the Mouse Somatosensory Cortex. Cerebral Cortex, 2003, 13, 1110-1121.	2.9	52
68	Does glutamate image your thoughts?. Trends in Neurosciences, 2002, 25, 359-364.	8.6	109
69	Role of astrocytes in coupling synaptic activity to glucose utilization. International Congress Series, 2002, 1235, 189-196.	0.2	1
70	Local Injection of Antisense Oligonucleotides Targeted to the Glial Glutamate Transporter GLAST Decreases the Metabolic Response to Somatosensory Activation. Journal of Cerebral Blood Flow and Metabolism, 2001, 21, 404-412.	4.3	80
71	Sustained attenuation of the cerebrovascular response to a 10 min whisker stimulation following neuronal nitric oxide synthase inhibition. Neuroscience Research, 2000, 37, 163-166.	1.9	22
72	Structural organization of the perivascular astrocyte endfeet and their relationship with the endothelial glucose transporter: A confocal microscopy study. , 1998, 23, 1-10.		300

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73	Structural organization of the perivascular astrocyte endfeet and their relationship with the endothelial glucose transporter: A confocal microscopy study. Glia, 1998, 23, 1-10.	4.9	9
74	Serotonin and Its Receptors. , 1997, , 80-82.		0
75	Autoradiographic Evidence for Flow-Metabolism Uncoupling During Stimulation of the Nucleus Basalis of Meynert in the Conscious Rat. Journal of Cerebral Blood Flow and Metabolism, 1997, 17, 686-694.	4.3	44
76	Local Uncoupling of the Cerebrovascular and Metabolic Responses to Somatosensory Stimulation after Neuronal Nitric Oxide Synthase Inhibition. Journal of Cerebral Blood Flow and Metabolism, 1997, 17, 1191-1201.	4.3	122
77	Cerebrovascular consequences of altering serotonergic transmission in conscious rat. Brain Research, 1997, 767, 208-213.	2.2	10
78	Effect of sympathectomy on the phenotype of smooth muscle cells of middle cerebral and ear arteries of hyperlipidaemic rabbits. The Histochemical Journal, 1997, 29, 279-286.	0.6	18
79	SEROTONIN IN THE REGULATION OF BRAIN MICROCIRCULATION. Progress in Neurobiology, 1996, 50, 335-362.	5.7	280
80	Effect of neuronal NO synthase inhibition on the cerebral vasodilatory response to somatosensory stimulation. Brain Research, 1996, 708, 197-200.	2.2	48
81	Is Î±-chloralose plus halothane induction a suitable anesthetic regimen for cerebrovascular research?. Brain Research, 1994, 665, 213-221.	2.2	87
82	Widespread Attenuation of the Cerebrovascular Reactivity to Hypercapnia following Inhibition of Nitric Oxide Synthase in the Conscious Rat. Journal of Cerebral Blood Flow and Metabolism, 1994, 14, 699-703.	4.3	30
83	The cerebrovascular role of the ascending serotonergic system: New vistas. Journal of the Autonomic Nervous System, 1994, 49, 37-42.	1.9	2
84	Effect of nimodipine on the autoregulation of cerebral blood flow studied by laser-Doppler flowmetry. Brain Research, 1993, 625, 301-306.	2.2	5
85	Effects of dorsal raphe nucleus stimulation on cerebral blood flow and flow-metabolism coupling in the conscious rat. Neuroscience, 1993, 55, 395-401.	2.3	20
86	Effect of local injection of 8-OH-DPAT into the dorsal or median raphe nuclei on extracellular levels of serotonin in serotonergic projection areas in the rat brain. Neuroscience Letters, 1992, 137, 101-104.	2.1	118
87	Cerebrovascular nerve fibers immunoreactive for tryptophan-5-hydroxylase in the rat: distribution, putative origin and comparison with sympathetic noradrenergic nerves. Brain Research, 1992, 598, 203-214.	2.2	33
88	Serotonergic innervation of the cerebral vasculature: relevance to migraine and ischaemia. Brain Research Reviews, 1991, 16, 257-263.	9.0	50
89	Effects of dorsal raphe stimulation on cerebral glucose utilization in the anaesthetized rat. Brain Research, 1991, 567, 325-327.	2.2	11
90	Evidence for Differing Origins of the Serotonergic Innervation of Major Cerebral Arteries and Small Pial Vessels in the Rat. Journal of Neurochemistry, 1991, 56, 681-689.	3.9	31

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91	Differential Effects of Electrical Stimulation of the Dorsal Raphe Nucleus and of Cervical Sympathectomy on Serotonin and Noradrenaline Concentrations in Major Cerebral Arteries and Pial Vessels in the Rat. Journal of Cerebral Blood Flow and Metabolism, 1990, 10, 123-126.	4.3	20
92	Effects of Electrical Stimulation of the Dorsal Raphe Nucleus on Local Cerebral Blood Flow in the Rat. Journal of Cerebral Blood Flow and Metabolism, 1989, 9, 251-255.	4.3	46