Giorgio Carmignoto

List of Publications by Year
in descending order

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83 papers	13,401 citations	46984 47 h-index	62565 80 g-index
84 all docs	84 docs citations	84 times ranked	10392 citing authors

#	Article	IF	Citations
1	Neuron-to-astrocyte signaling is central to the dynamic control of brain microcirculation. Nature Neuroscience, 2003, 6, 43-50.	7.1	1,296
2	Astrocyte Control of Synaptic Transmission and Neurovascular Coupling. Physiological Reviews, 2006, 86, 1009-1031.	13.1	1,145
3	Prostaglandins stimulate calcium-dependent glutamate release in astrocytes. Nature, 1998, 391, 281-285.	13.7	1,071
4	Gliotransmitters Travel in Time and Space. Neuron, 2014, 81, 728-739.	3.8	1,010
5	Neuronal Synchrony Mediated by Astrocytic Glutamate through Activation of Extrasynaptic NMDA Receptors. Neuron, 2004, 43, 729-743.	3.8	843
6	Intracellular Calcium Oscillations in Astrocytes: A Highly Plastic, Bidirectional Form of Communication between Neurons and AstrocytesIn Situ. Journal of Neuroscience, 1997, 17, 7817-7830.	1.7	690
7	Activity-dependent decrease in NMDA receptor responses during development of the visual cortex. Science, 1992, 258, 1007-1011.	6.0	674
8	Dynamic Signaling Between Astrocytes and Neurons. Annual Review of Physiology, 2001, 63, 795-813.	5.6	549
9	N-methyl-D-aspartate-induced neurotoxicity in the adult rat retina. Visual Neuroscience, 1992, 8, 567-573.	0.5	274
10	Cytosolic Calcium Oscillations in Astrocytes May Regulate Exocytotic Release of Glutamate. Journal of Neuroscience, 2001, 21, 477-484.	1.7	264
11	Enhanced Astrocytic Ca²⁺Signals Contribute to Neuronal Excitotoxicity after Status Epilepticus. Journal of Neuroscience, 2007, 27, 10674-10684.	1.7	248
12	Astroglial Excitability and Gliotransmission: An Appraisal of Ca²⁺ as a Signalling Route. ASN Neuro, 2012, 4, AN20110061.	1.5	240
13	Effect of NGF on the survival of rat retinal ganglion cells following optic nerve section. Journal of Neuroscience, 1989, 9, 1263-1272.	1.7	238
14	Motor nerve sprouting induced by ganglioside treatment. Possible implications for gangliosides on neuronal growth. Brain Research, 1980, 197, 236-241.	1.1	230
15	Astrocyte dysfunction in epilepsy. Brain Research Reviews, 2010, 63, 212-221.	9.1	228
16	Neurone-to-astrocyte signalling in the brain represents a distinct multifunctional unit. Journal of Physiology, 2004, 559, 3-15.	1.3	221
17	Reciprocal communication systems between astrocytes and neurones. Progress in Neurobiology, 2000, 62, 561-581.	2.8	208
18	Brainâ€derived neurotrophic factor and nerve growth factor potentiate excitatory synaptic transmission in the rat visual cortex.. Journal of Physiology, 1997, 498, 153-164.	1.3	200

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19	An Excitatory Loop with Astrocytes Contributes to Drive Neurons to Seizure Threshold. PLoS Biology, 2010, 8, e1000352.	2.6	194
20	Muscle reinnervationâ€”II. Sprouting, synapse formation and repression. Neuroscience, 1983, 8, 403-IN1.	1.1	164
21	Glutamateâ€mediated cytosolic calcium oscillations regulate a pulsatile prostaglandin release from cultured rat astrocytes. Journal of Physiology, 2003, 553, 407-414.	1.3	159
22	Astrocytic Glutamate Is Not Necessary for the Generation of Epileptiform Neuronal Activity in Hippocampal Slices. Journal of Neuroscience, 2006, 26, 9312-9322.	1.7	153
23	On the Role of Voltage-Dependent Calcium Channels in Calcium Signaling of AstrocytesIn Situ. Journal of Neuroscience, 1998, 18, 4637-4645.	1.7	150
24	Fast spiking interneuron control of seizure propagation in a cortical slice model of focal epilepsy. Journal of Physiology, 2013, 591, 807-822.	1.3	147
25	The contribution of astrocyte signalling to neurovascular coupling. Brain Research Reviews, 2010, 63, 138-148.	9.1	145
26	Purinergic Receptors Mediate Two Distinct Glutamate Release Pathways in Hippocampal Astrocytes. Journal of Biological Chemistry, 2006, 281, 4274-4284.	1.6	141
27	Parvalbumin-Positive Inhibitory Interneurons Oppose Propagation But Favor Generation of Focal Epileptiform Activity. Journal of Neuroscience, 2015, 35, 9544-9557.	1.7	123
28	Astrocyte calcium signaling and epilepsy. Glia, 2012, 60, 1227-1233.	2.5	117
29	Synaptobrevin2-expressing vesicles in rat astrocytes: insights into molecular characterization, dynamics and exocytosis. Journal of Physiology, 2006, 570, 567-582.	1.3	116
30	Nerve growth factor prevents the amblyopic effects of monocular deprivation.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 8811-8815.	3.3	107
31	Expression of NGF receptor and NGF receptor mRNA in the developing and adult rat retina. Experimental Neurology, 1991, 111, 302-311.	2.0	103
32	Effects of nerve growth factor on neuronal plasticity of the kitten visual cortex.. Journal of Physiology, 1993, 464, 343-360.	1.3	102
33	Long-lasting Changes of Calcium Oscillations in Astrocytes. Journal of Biological Chemistry, 1995, 270, 15203-15210.	1.6	97
34	The inhibitory neurotransmitter <scp>GABA</scp> evokes longâ€lasting <scp>C</scp>a²⁺ oscillations in cortical astrocytes. Glia, 2016, 64, 363-373.	2.5	96
35	Crucial role of astrocytes in temporal lobe epilepsy. Neuroscience, 2016, 323, 157-169.	1.1	91
36	Interneuron-specific signaling evokes distinctive somatostatin-mediated responses in adult cortical astrocytes. Nature Communications, 2018, 9, 82.	5.8	88

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37	Schwann cells promote the survival of rat retinal ganglion cells after optic nerve section.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 1855-1859.	3.3	74
38	Glutamateâ€mediated astrocyteâ€toâ€neuron signalling in the rat dorsal horn. Journal of Physiology, 2010, 588, 831-846.	1.3	73
39	Glutamate release from astrocytes as a non-synaptic mechanism for neuronal synchronization in the hippocampus. Journal of Physiology (Paris), 2006, 99, 98-102.	2.1	68
40	Bothrops snake myotoxins induce a large efflux of ATP and potassium with spreading of cell damage and pain. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14140-14145.	3.3	66
41	Spatialâ€frequency characteristics of neurones of area 18 in the cat: dependence on the velocity of the visual stimulus.. Journal of Physiology, 1985, 359, 259-268.	1.3	64
42	Unaltered Network Activity and Interneuronal Firing During Spontaneous Cortical Dynamics In Vivo in a Mouse Model of Severe Myoclonic Epilepsy of Infancy. Cerebral Cortex, 2016, 26, 1778-1794.	1.6	62
43	Nitric Oxide-Producing Islet Cells Modulate the Release of Sensory Neuropeptides in the Rat Substantia Gelatinosa. Journal of Neuroscience, 1998, 18, 10375-10388.	1.7	58
44	Neurotrophins in spinal cord nociceptive pathways. Progress in Brain Research, 2004, 146, 291-321.	0.9	57
45	Presynaptic functional trkB receptors mediate the release of excitatory neurotransmitters from primary afferent terminals in lamina II (substantia gelatinosa) of postnatal rat spinal cord. Developmental Neurobiology, 2008, 68, 457-475.	1.5	56
46	Muscle reinnervationâ€"I. Restoration of transmitter release mechanisms. Neuroscience, 1983, 8, 393-401.	1.1	53
47	Interneuronal Network Activity at the Onset of Seizure-Like Events in Entorhinal Cortex Slices. Journal of Neuroscience, 2017, 37, 10398-10407.	1.7	52
48	GABAergic interneuron to astrocyte signalling: a neglected form of cell communication in the brain. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130609.	1.8	50
49	The inflammatory molecules IL-1ÃŽÂ² and HMGB1 can rapidly enhance focal seizure generation in a brain slice model of temporal lobe epilepsy. Frontiers in Cellular Neuroscience, 2014, 8, 155.	1.8	49
50	Calcium Signals in Astrocyte Microdomains, a Decade of Great Advances. Frontiers in Cellular Neuroscience, 2021, 15, 673433.	1.8	48
51	Calcium oscillations encoding neuron-to-astrocyte communication. Journal of Physiology (Paris), 2002, 96, 193-198.	2.1	47
52	Flash and pattern electroretinograms during and after acute intraocular pressure elevation in cats. Investigative Ophthalmology and Visual Science, 1988, 29, 558-65.	3.3	47
53	Distribution of protein gene product 9.5 (PGP 9.5) in the vertebrate retina: Evidence that immunoreactivity is restricted to mammalian horizontal and ganglion cells. Journal of Comparative Neurology, 1992, 322, 35-44.	0.9	46
54	Novel astrocyte targets. Neuroscientist, 2015, 21, 62-83.	2.6	46

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55	The Role of Astroglia in the Epileptic Brain. Frontiers in Pharmacology, 2012, 3, 132.	1.6	41
56	Computational model of neuron-astrocyte interactions during focal seizure generation. Frontiers in Computational Neuroscience, 2012, 6, 81.	1.2	38
57	Developing Rat Retinal Ganglion Cells Express the Functional NGF Receptor p140trkA. Developmental Biology, 1993, 159, 105-113.	0.9	36
58	Response: Astrocyte-mediated control of cerebral microcirculation. Trends in Neurosciences, 2003, 26, 344-345.	4.2	31
59	New Tools to Study Astrocyte Ca2+ Signal Dynamics in Brain Networks In Vivo. Frontiers in Cellular Neuroscience, 2017, 11, 134.	1.8	30
60	Synchronous Bioimaging of Intracellular pH and Chloride Based on LSS Fluorescent Protein. ACS Chemical Biology, 2016, 11, 1652-1660.	1.6	28
61	A new experimental model of focal seizures in the entorhinal cortex. Epilepsia, 2010, 51, 1493-1502.	2.6	26
62	New vistas on astroglia in convulsive and nonâ€convulsive epilepsy highlight novel astrocytic targets for treatment. Journal of Physiology, 2013, 591, 775-785.	1.3	24
63	Insights into the release mechanism of astrocytic glutamate evoking in neurons NMDA receptorâ€mediated slow depolarizing inward currents. Glia, 2018, 66, 2188-2199.	2.5	22
64	Ictal but Not Interictal Epileptic Discharges Activate Astrocyte Endfeet and Elicit Cerebral Arteriole Responses. Frontiers in Cellular Neuroscience, 2011, 5, 8.	1.8	20
65	A brain slice experimental model to study the generation and the propagation of focally-induced epileptiform activity. Journal of Neuroscience Methods, 2016, 260, 125-131.	1.3	20
66	Monocular deprivation in kittens differently affects crossed and uncrossed visual pathways. Vision Research, 1986, 26, 875-884.	0.7	18
67	Calpain activity contributes to the control of SNAP-25 levels in neurons. Molecular and Cellular Neurosciences, 2008, 39, 314-323.	1.0	18
68	Paradoxical Ca 2+ Rises induced by Low External Ca 2+ in Rat Hippocampal Neurones. Journal of Physiology, 2003, 549, 537-552.	1.3	15
69	Primary cultures from fetal bovine brain. NeuroReport, 2004, 15, 1719-1722.	0.6	15
70	mCerulean3-Based Cameleon Sensor to Explore Mitochondrial Ca2+ Dynamics InÂVivo. IScience, 2019, 16, 340-355.	1.9	15
71	Cellular calcium handling in brain slices from calbindin D28k-deficient mice. NeuroReport, 1999, 10, 2367-2372.	0.6	14
72	Astrocyteâ€“neurone crosstalk: variants of the same language?. Trends in Pharmacological Sciences, 2000, 21, 373-374.	4.0	11

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73	Dynamic interactions between GABAergic and astrocytic networks. Neuroscience Letters, 2019, 689, 14-20.	1.0	10
74	Can functional reorganization of area 17 following monocular deprivation be modified by GM1 internal ester treatment?. Journal of Neuroscience Research, 1984, 12, 477-483.	1.3	7
75	mGlu1 Receptors Monopolize the Synaptic Control of Cerebellar Purkinje Cells by Epigenetically Down-Regulating mGlu5 Receptors. Scientific Reports, 2018, 8, 13361.	1.6	6
76	Cellular and molecular mechanisms of new onset seizure generation. Aging Clinical and Experimental Research, 2019, 33, 1713-1716.	1.4	5
77	Astrocytes Modulate Somatostatin Interneuron Signaling in the Visual Cortex. Cells, 2022, 11, 1400.	1.8	5
78	Optogenetic Interneuron Stimulation and Calcium Imaging in Astrocytes. Methods in Molecular Biology, 2019, 1925, 173-182.	0.4	2
79	Pharmacological Aspects of Experimental Peripheral Neuropathy. , 1984, , 259-276.		2
80	Dysbindin-1A modulation of astrocytic dopamine and basal ganglia dependent behaviors relevant to schizophrenia. Molecular Psychiatry, 2022, 27, 4201-4217.	4.1	2
81	Electrophysiological and Morphological Correlates of the Re-Innervation of Rat Neuromuscular Junction: Implications on the Role of Membrane Components such as Gangliosides in the Motor Nerve Sprouting. Advances in Behavioral Biology, 1981, , 221-233.	0.2	1
82	P.116 Interneuron-astrocyte interactions in neurovascular coupling. European Neuropsychopharmacology, 2020, 31, S12.	0.3	0
83	Physiological and Pathological Roles of Astrocyte-mediated Neuronal Synchrony. , 2009, , 513-525.		0