Andrea Volterra

List of Publications by Year
in descending order

68 papers	14,505 citations	66343 42 h-index	114465 63 g-index
68 all docs	68 docs citations	68 times ranked	11900 citing authors

#	Article	IF	Citations
1	Astrocytes, from brain glue to communication elements: the revolution continues. Nature Reviews Neuroscience, 2005, 6, 626-640.	10.2	1,513
2	Reactive astrocyte nomenclature, definitions, and future directions. Nature Neuroscience, 2021, 24, 312-325.	14.8	1,098
3	Prostaglandins stimulate calcium-dependent glutamate release in astrocytes. Nature, 1998, 391, 281-285.	27.8	1,071
4	Gliotransmitters Travel in Time and Space. Neuron, 2014, 81, 728-739.	8.1	1,010
5	CXCR4-activated astrocyte glutamate release via TNFÎ±: amplification by microglia triggers neurotoxicity. Nature Neuroscience, 2001, 4, 702-710.	14.8	996
6	Glutamate exocytosis from astrocytes controls synaptic strength. Nature Neuroscience, 2007, 10, 331-339.	14.8	706
7	Intracellular Calcium Oscillations in Astrocytes: A Highly Plastic, Bidirectional Form of Communication between Neurons and AstrocytesIn Situ. Journal of Neuroscience, 1997, 17, 7817-7830.	3.6	690
8	Astrocytes contain a vesicular compartment that is competent for regulated exocytosis of glutamate. Nature Neuroscience, 2004, 7, 613-620.	14.8	637
9	Astrocyte function from information processing to cognition and cognitive impairment. Nature Neuroscience, 2019, 22, 154-166.	14.8	466
10	Local Ca2+ detection and modulation of synaptic release by astrocytes. Nature Neuroscience, 2011, 14, 1276-1284.	14.8	451
11	Glutamate transporters are oxidant-vulnerable: a molecular link between oxidative and excitotoxic neurodegeneration?. Trends in Pharmacological Sciences, 1998, 19, 328-334.	8.7	422
12	A neuronâ€“glia signalling network in the active brain. Current Opinion in Neurobiology, 2001, 11, 387-394.	4.2	398
13	Astrocyte Ca2+ signalling: an unexpected complexity. Nature Reviews Neuroscience, 2014, 15, 327-335.	10.2	365
14	TNFÎ± Controls Glutamatergic Gliotransmission in the Hippocampal Dentate Gyrus. Neuron, 2011, 69, 988-1001.	8.1	318
15	Peroxynitrite Inhibits Glutamate Transporter Subtypes. Journal of Biological Chemistry, 1996, 271, 5976-5979.	3.4	317
16	Three-dimensional Ca ²⁺ imaging advances understanding of astrocyte biology. Science, 2017, 356, .	12.6	259
17	Neuroinflammatory TNFÎ± Impairs Memory via Astrocyte Signaling. Cell, 2015, 163, 1730-1741.	28.9	258
18	Gliotransmission: Beyond Black-and-White. Journal of Neuroscience, 2018, 38, 14-25.	3.6	256

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19	TNFÎ± in synaptic function: switching gears. Trends in Neurosciences, 2012, 35, 638-647.	8.6	224
20	Astrocytic dysfunction: Insights on the role in neurodegeneration. Brain Research Bulletin, 2009, 80, 224-232.	3.0	205
21	Astrocytes: Orchestrating synaptic plasticity?. Neuroscience, 2016, 323, 43-61.	2.3	196
22	High Sensitivity of Glutamate Uptake to Extracellular Free Arachidonic Acid Levels in Rat Cortical Synaptosomes and Astrocytes. Journal of Neurochemistry, 1992, 59, 600-606.	3.9	195
23	P2Y1 Receptor-evoked Glutamate Exocytosis from Astrocytes. Journal of Biological Chemistry, 2006, 281, 30684-30696.	3.4	190
24	The Ca _V 3.3 calcium channel is the major sleep spindle pacemaker in thalamus. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13823-13828.	7.1	180
25	Neuronal and Glial Glutamate Transporters Possess an SH-based Redox Regulatory Mechanism. European Journal of Neuroscience, 1997, 9, 1236-1243.	2.6	163
26	Direct modulation of Aplysia S-K+ channels by a 12-lipoxygenase metabolite of arachidonic acid. Nature, 1989, 342, 553-555.	27.8	136
27	Glial modulation of synaptic transmission in the hippocampus. Glia, 2004, 47, 249-257.	4.9	127
28	Synaptic modulation by astrocytes via Ca2+-dependent glutamate release. Neuroscience, 2009, 158, 253-259.	2.3	126
29	Glutamate Release from Astrocytes in Physiological Conditions and in Neurodegenerative Disorders Characterized by Neuroinflammation. International Review of Neurobiology, 2007, 82, 57-71.	2.0	125
30	Arachidonic Acid Inhibits a Purified and Reconstituted Glutamate Transporter Directly from the Water Phase and Not via the Phospholipid Membrane. Journal of Biological Chemistry, 1995, 270, 9890-9895.	3.4	112
31	The Competitive Transport Inhibitor L-trans-pyrrolidine-2,4-dicarboxylate Triggers Excitotoxicity in Rat Cortical Neuron-Astrocyte Co-cultures via Glutamate Release rather than Uptake Inhibition. European Journal of Neuroscience, 1996, 8, 2019-2028.	2.6	101
32	What do we know about gliotransmitter release from astrocytes?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130592.	4.0	96
33	Neuron-astrocyte cross-talk during synaptic transmission: physiological and neuropathological implications. Progress in Brain Research, 2001, 132, 255-265.	1.4	91
34	HIV-1 gp120 glycoprotein affects the astrocyte control of extracellular glutamate by both inhibiting the uptake and stimulating the release of the amino acid. FEBS Letters, 1997, 411, 107-109.	2.8	86
35	Non-synaptic Localization of the Glutamate Transporter EAAC1 in Cultured Hippocampal Neurons. European Journal of Neuroscience, 1997, 9, 1902-1910.	2.6	84
36	The BH4 domain of Bcl-XL rescues astrocyte degeneration in amyotrophic lateral sclerosis by modulating intracellular calcium signals. Human Molecular Genetics, 2012, 21, 826-840.	2.9	82

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37	Morphine withdrawal recruits lateral habenula cytokine signaling to reduce synaptic excitation and sociability. Nature Neuroscience, 2019, 22, 1053-1056.	14.8	71
38	Computational quest for understanding the role of astrocyte signaling in synaptic transmission and plasticity. Frontiers in Computational Neuroscience, 2012, 6, 98.	2.1	63
39	Differential Modulation of the Uptake Currents by Redox Interconversion of Cysteine Residues in the Human Neuronal Glutamate Transporter EAAC1. European Journal of Neuroscience, 1997, 9, 2207-2212.	2.6	57
40	SNARE protein expression in synaptic terminals and astrocytes in the adult hippocampus: A comparative analysis. Glia, 2011, 59, 1472-1488.	4.9	57
41	OpenFovea: open-source AFM data processing software. Nature Methods, 2012, 9, 774-775.	19.0	51
42	Defective Tumor Necrosis Factor-Î±-dependent Control of Astrocyte Glutamate Release in a Transgenic Mouse Model of Alzheimer Disease. Journal of Biological Chemistry, 2005, 280, 42088-42096.	3.4	48
43	Generation and Characterization of Anti-VGLUT Nanobodies Acting as Inhibitors of Transport. Biochemistry, 2017, 56, 3962-3971.	2.5	40
44	Astrocytes as Active Participants of Glutamatergic Function and Regulators of its Homeostasis. Advances in Experimental Medicine and Biology, 1999, 468, 69-80.	1.6	34
45	Astrocytes: Powering Memory. Cell, 2011, 144, 644-645.	28.9	32
46	Hypoglycemia-activated K+ channels in hippocampal neurons. Neuroscience Letters, 1992, 143, 185-189.	2.1	30
47	Age-related changes in 5HT uptake and [3H]imipramine binding sites in rat cerebral cortex. European Journal of Pharmacology, 1985, 110, 393-394.	3.5	29
48	The Highly Integrated Dialogue between Neurons and Astrocytes in Brain Function. Science Progress, 1999, 82, 251-270.	1.9	28
49	Astrocytes as aide-mÃ©moires. Nature, 2010, 463, 169-170.	27.8	25
50	Inhibitory effect of the neuroprotective agent idebenone on arachidonic acid metabolism in astrocytes. European Journal of Pharmacology, 1999, 370, 161-167.	3.5	23
51	Circuit-specific control of the medial entorhinal inputs to the dentate gyrus by atypical presynaptic NMDARs activated by astrocytes. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13602-13610.	7.1	23
52	Glial control of synaptic function. Glia, 2004, 47, 207-208.	4.9	21
53	Astrocyte control of the entorhinal cortexâ€dentate gyrus circuit: Relevance to cognitive processing and impairment in pathology. Glia, 2022, 70, 1536-1553.	4.9	16
54	Interaction of Î²-casomorphins with multiple opioid receptors: In vitro and in vivo studies in the newborn rat brain. Developmental Brain Research, 1986, 30, 25-30.	1.7	15

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55	Analysis of acute brain slices by electron microscopy: A correlative lightâ€“electron microscopy workflow based on Tokuyasu cryo-sectioning. Journal of Structural Biology, 2015, 189, 53-61.	2.8	14
56	Studying Axon-Astrocyte Functional Interactions by 3D Two-Photon Ca2+ Imaging: A Practical Guide to Experiments and â€œBig Dataâ€•Analysis. Frontiers in Cellular Neuroscience, 2018, 12, 98.	3.7	13
57	A particle beam-liquid chromatography-mass spectrometry method for the determination of lipoxygenase metabolites of arachidonic acid. Analytical Biochemistry, 1992, 201, 356-361.	2.4	12
58	Synaptic Transmission with the Glia. Physiology, 2001, 16, 178-184.	3.1	12
59	Synaptic Adhesion Molecules Regulate the Integration of New Granule Neurons in the Postnatal Mouse Hippocampus and their Impact on Spatial Memory. Cerebral Cortex, 2017, 27, 4048-4059.	2.9	12
60	Imaging Exocytosis and Recycling of Synaptic-Like Microvesicles in Astrocytes. Cold Spring Harbor Protocols, 2014, 2014, pdb.prot081711.	0.3	11
61	Hippocampal hypoglycaemia-activated K+ channels: single-channel analysis of glucose and voltage dependence. Pflugers Archiv European Journal of Physiology, 1994, 429, 58-63.	2.8	5
62	[Ca2+] Modulates the ratio between cycloxygenase and lipoxygenase metabolism of arachidonic acid in homogenates of hippocampal astroglial cultures. Neuroscience Letters, 1995, 183, 160-163.	2.1	5
63	Identification and Staining of Distinct Populations of Secretory Organelles in Astrocytes. Cold Spring Harbor Protocols, 2014, 2014, pdb.prot081703.	0.3	4
64	Contribution of Astrocyte Glutamate Release to Excitotoxicity. , 2004, , 13-26.		2
65	Quantal Release of Transmitter: Not Only from Neurons but from Aastrocytes as Well?. , 2004, , 190-201.		2
66	A Bayesian approach to the analysis of single-channel records. , 1992, , .		0
67	An astrocytic control of excitatory transmission at granular cell synapses in hippocampus. Journal of Physiology (Paris), 2006, 99, 1.	2.1	0
68	Glutamate Transporters: Molecular Mechanisms of Functional Alteration and Role in the Development of Excitotoxic Neuronal Injury. , 1996, , 33-36.		0