

# Andrea Volterra

## List of Publications by Year in descending order

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68  
papers

14,505  
citations

66234

42  
h-index

114278

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. <i>Nature Reviews Neuroscience</i> , 2005, 6, 626-640.	4.9	1,513
2	Reactive astrocyte nomenclature, definitions, and future directions. <i>Nature Neuroscience</i> , 2021, 24, 312-325.	7.1	1,098
3	Prostaglandins stimulate calcium-dependent glutamate release in astrocytes. <i>Nature</i> , 1998, 391, 281-285.	13.7	1,071
4	Glutamate transporters Travel in Time and Space. <i>Neuron</i> , 2014, 81, 728-739.	3.8	1,010
5	CXCR4-activated astrocyte glutamate release via TNF $\alpha$ : amplification by microglia triggers neurotoxicity. <i>Nature Neuroscience</i> , 2001, 4, 702-710.	7.1	996
6	Glutamate exocytosis from astrocytes controls synaptic strength. <i>Nature Neuroscience</i> , 2007, 10, 331-339.	7.1	706
7	Intracellular Calcium Oscillations in Astrocytes: A Highly Plastic, Bidirectional Form of Communication between Neurons and Astrocytes <i>In Situ</i> . <i>Journal of Neuroscience</i> , 1997, 17, 7817-7830.	1.7	690
8	Astrocytes contain a vesicular compartment that is competent for regulated exocytosis of glutamate. <i>Nature Neuroscience</i> , 2004, 7, 613-620.	7.1	637
9	Astrocyte function from information processing to cognition and cognitive impairment. <i>Nature Neuroscience</i> , 2019, 22, 154-166.	7.1	466
10	Local Ca <sup>2+</sup> detection and modulation of synaptic release by astrocytes. <i>Nature Neuroscience</i> , 2011, 14, 1276-1284.	7.1	451
11	Glutamate transporters are oxidant-vulnerable: a molecular link between oxidative and excitotoxic neurodegeneration?. <i>Trends in Pharmacological Sciences</i> , 1998, 19, 328-334.	4.0	422
12	A neuron-glia signalling network in the active brain. <i>Current Opinion in Neurobiology</i> , 2001, 11, 387-394.	2.0	398
13	Astrocyte Ca <sup>2+</sup> signalling: an unexpected complexity. <i>Nature Reviews Neuroscience</i> , 2014, 15, 327-335.	4.9	365
14	TNF $\alpha$ Controls Glutamatergic Gliotransmission in the Hippocampal Dentate Gyrus. <i>Neuron</i> , 2011, 69, 988-1001.	3.8	318
15	Peroxynitrite Inhibits Glutamate Transporter Subtypes. <i>Journal of Biological Chemistry</i> , 1996, 271, 5976-5979.	1.6	317
16	Three-dimensional Ca <sup>2+</sup> imaging advances understanding of astrocyte biology. <i>Science</i> , 2017, 356, .	6.0	259
17	Neuroinflammatory TNF $\alpha$ Impairs Memory via Astrocyte Signaling. <i>Cell</i> , 2015, 163, 1730-1741.	13.5	258
18	Gliotransmission: Beyond Black-and-White. <i>Journal of Neuroscience</i> , 2018, 38, 14-25.	1.7	256

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19	TNFÎ± in synaptic function: switching gears. Trends in Neurosciences, 2012, 35, 638-647.	4.2	224
20	Astrocytic dysfunction: Insights on the role in neurodegeneration. Brain Research Bulletin, 2009, 80, 224-232.	1.4	205
21	Astrocytes: Orchestrating synaptic plasticity?. Neuroscience, 2016, 323, 43-61.	1.1	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.	2.1	195
23	P2Y1 Receptor-evoked Glutamate Exocytosis from Astrocytes. Journal of Biological Chemistry, 2006, 281, 30684-30696.	1.6	190
24	The Ca <sup>v</sup> 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.	3.3	180
25	Neuronal and Glial Glutamate Transporters Possess an SH-based Redox Regulatory Mechanism. European Journal of Neuroscience, 1997, 9, 1236-1243.	1.2	163
26	Direct modulation of Aplysia S-K <sup>+</sup> channels by a 12-lipoxygenase metabolite of arachidonic acid. Nature, 1989, 342, 553-555.	13.7	136
27	Glial modulation of synaptic transmission in the hippocampus. Glia, 2004, 47, 249-257.	2.5	127
28	Synaptic modulation by astrocytes via Ca <sup>2+</sup> -dependent glutamate release. Neuroscience, 2009, 158, 253-259.	1.1	126
29	Glutamate Release from Astrocytes in Physiological Conditions and in Neurodegenerative Disorders Characterized by Neuroinflammation. International Review of Neurobiology, 2007, 82, 57-71.	0.9	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.	1.6	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.	1.2	101
32	What do we know about gliotransmitter release from astrocytes?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130592.	1.8	96
33	Neuron-astrocyte cross-talk during synaptic transmission: physiological and neuropathological implications. Progress in Brain Research, 2001, 132, 255-265.	0.9	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.	1.3	86
35	Non-synaptic Localization of the Glutamate Transporter EAAC1 in Cultured Hippocampal Neurons. European Journal of Neuroscience, 1997, 9, 1902-1910.	1.2	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.	1.4	82

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37	Morphine withdrawal recruits lateral habenula cytokine signaling to reduce synaptic excitation and sociability. <i>Nature Neuroscience</i> , 2019, 22, 1053-1056.	7.1	71
38	Computational quest for understanding the role of astrocyte signaling in synaptic transmission and plasticity. <i>Frontiers in Computational Neuroscience</i> , 2012, 6, 98.	1.2	63
39	Differential Modulation of the Uptake Currents by Redox Interconversion of Cysteine Residues in the Human Neuronal Glutamate Transporter EAAC1. <i>European Journal of Neuroscience</i> , 1997, 9, 2207-2212.	1.2	57
40	SNARE protein expression in synaptic terminals and astrocytes in the adult hippocampus: A comparative analysis. <i>Glia</i> , 2011, 59, 1472-1488.	2.5	57
41	OpenFovea: open-source AFM data processing software. <i>Nature Methods</i> , 2012, 9, 774-775.	9.0	51
42	Defective Tumor Necrosis Factor- $\alpha$ -dependent Control of Astrocyte Glutamate Release in a Transgenic Mouse Model of Alzheimer Disease. <i>Journal of Biological Chemistry</i> , 2005, 280, 42088-42096.	1.6	48
43	Generation and Characterization of Anti-VGLUT Nanobodies Acting as Inhibitors of Transport. <i>Biochemistry</i> , 2017, 56, 3962-3971.	1.2	40
44	Astrocytes as Active Participants of Glutamatergic Function and Regulators of its Homeostasis. <i>Advances in Experimental Medicine and Biology</i> , 1999, 468, 69-80.	0.8	34
45	Astrocytes: Powering Memory. <i>Cell</i> , 2011, 144, 644-645.	13.5	32
46	Hypoglycemia-activated K <sup>+</sup> channels in hippocampal neurons. <i>Neuroscience Letters</i> , 1992, 143, 185-189.	1.0	30
47	Age-related changes in 5HT uptake and [3H]imipramine binding sites in rat cerebral cortex. <i>European Journal of Pharmacology</i> , 1985, 110, 393-394.	1.7	29
48	The Highly Integrated Dialogue between Neurons and Astrocytes in Brain Function. <i>Science Progress</i> , 1999, 82, 251-270.	1.0	28
49	Astrocytes as aide-mÃ©moires. <i>Nature</i> , 2010, 463, 169-170.	13.7	25
50	Inhibitory effect of the neuroprotective agent idebenone on arachidonic acid metabolism in astrocytes. <i>European Journal of Pharmacology</i> , 1999, 370, 161-167.	1.7	23
51	Circuit-specific control of the medial entorhinal inputs to the dentate gyrus by atypical presynaptic NMDARs activated by astrocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 13602-13610.	3.3	23
52	Glial control of synaptic function. <i>Glia</i> , 2004, 47, 207-208.	2.5	21
53	Astrocyte control of the entorhinal cortexâ€”dentate gyrus circuit: Relevance to cognitive processing and impairment in pathology. <i>Glia</i> , 2022, 70, 1536-1553.	2.5	16
54	Interaction of $\delta$ -casomorphins with multiple opioid receptors: In vitro and in vivo studies in the newborn rat brain. <i>Developmental Brain Research</i> , 1986, 30, 25-30.	2.1	15

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55	Analysis of acute brain slices by electron microscopy: A correlative light-electron microscopy workflow based on Tokuyasu cryo-sectioning. <i>Journal of Structural Biology</i> , 2015, 189, 53-61.	1.3	14
56	Studying Axon-Astrocyte Functional Interactions by 3D Two-Photon Ca <sup>2+</sup> Imaging: A Practical Guide to Experiments and Big Data Analysis. <i>Frontiers in Cellular Neuroscience</i> , 2018, 12, 98.	1.8	13
57	A particle beam-liquid chromatography-mass spectrometry method for the determination of lipoxygenase metabolites of arachidonic acid. <i>Analytical Biochemistry</i> , 1992, 201, 356-361.	1.1	12
58	Synaptic Transmission with the Glia. <i>Physiology</i> , 2001, 16, 178-184.	1.6	12
59	Synaptic Adhesion Molecules Regulate the Integration of New Granule Neurons in the Postnatal Mouse Hippocampus and their Impact on Spatial Memory. <i>Cerebral Cortex</i> , 2017, 27, 4048-4059.	1.6	12
60	Imaging Exocytosis and Recycling of Synaptic-Like Microvesicles in Astrocytes. <i>Cold Spring Harbor Protocols</i> , 2014, 2014, pdb.prot081711.	0.2	11
61	Hippocampal hypoglycaemia-activated K <sup>+</sup> channels: single-channel analysis of glucose and voltage dependence. <i>Pflügers Archiv European Journal of Physiology</i> , 1994, 429, 58-63.	1.3	5
62	[Ca <sup>2+</sup> ] Modulates the ratio between cyclooxygenase and lipoxygenase metabolism of arachidonic acid in homogenates of hippocampal astroglial cultures. <i>Neuroscience Letters</i> , 1995, 183, 160-163.	1.0	5
63	Identification and Staining of Distinct Populations of Secretory Organelles in Astrocytes. <i>Cold Spring Harbor Protocols</i> , 2014, 2014, pdb.prot081703.	0.2	4
64	Contribution of Astrocyte Glutamate Release to Excitotoxicity. , 2004, , 13-26.		2
65	Quantal Release of Transmitter: Not Only from Neurons but from Astrocytes 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. <i>Journal of Physiology (Paris)</i> , 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