Alexey Semyanov

List of Publications by Year
in descending order

87	5,993	109321 35	82547 72
papers	citations	h-index	g-index

99	99	99	5242
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Glial decline and loss of homeostatic support rather than inflammation defines cognitive aging. Neural Regeneration Research, 2022, 17, 565.	3.0	9
2	K⁺ efflux through postsynaptic <scp>NMDA</scp> receptors suppresses local astrocytic glutamate uptake. Glia, 2022, 70, 961-974.	4.9	14
3	Inclusive Brain: From Neuronal Doctrine to the Active Milieu. Function, 2022, 3, zqab069.	2.3	14
4	The great astroglial metabolic revolution: Mitochondria fuel astrocyte homeostatic support and neuroprotection. Cell Calcium, 2022, 104, 102583.	2.4	13
5	A highâ€fat diet changes astrocytic metabolism to promote synaptic plasticity and behavior. Acta Physiologica, 2022, 236, .	3.8	18
6	Restored oligodendrogenesis by fibroblast growth factor 17: molecular mechanism for rejuvenating ageing-related memory deficit. Signal Transduction and Targeted Therapy, 2022, 7, .	17.1	0
7	Fluorescence lifetime imaging reveals regulation of presynaptic Ca 2+ by glutamate uptake and mGluRs, but not somatic voltage in cortical neurons. Journal of Neurochemistry, 2021, 156, 48-58.	3.9	2
8	Astroglial asthenia and loss of function, rather than reactivity, contribute to the ageing of the brain. Pflugers Archiv European Journal of Physiology, 2021, 473, 753-774.	2.8	67
9	Calcium signaling in neuroglia. International Review of Cell and Molecular Biology, 2021, 362, 1-53.	3.2	42
10	Reactive astrocyte nomenclature, definitions, and future directions. Nature Neuroscience, 2021, 24, 312-325.	14.8	1,098
11	Astrocyte dystrophy in ageing brain parallels impaired synaptic plasticity. Aging Cell, 2021, 20, e13334.	6.7	72
12	A Neural Circuit for Gut-Induced Sugar Preference. Neuroscience Bulletin, 2021, 37, 754-756.	2.9	0
13	The anti-inflammatory astrocyte revealed: the role of the microbiome in shaping brain defences. Signal Transduction and Targeted Therapy, 2021, 6, 150.	17.1	2
14	From purines to purinergic signalling: molecular functions and human diseases. Signal Transduction and Targeted Therapy, 2021, 6, 162.	17.1	171
15	Effect of Diet as a Factor of Exposome on Brain Function. Journal of Evolutionary Biochemistry and Physiology, 2021, 57, 577-604.	0.6	1
16	Attenuation of the extracellular matrix increases the number of synapses but suppresses synaptic plasticity through upregulation of SK channels. Cell Calcium, 2021, 96, 102406.	2.4	10
17	Caloric restriction modifies spatiotemporal calcium dynamics in mouse hippocampal astrocytes. Biochimica Et Biophysica Acta - Molecular Cell Research, 2021, 1868, 119034.	4.1	6
18	Optical control of purinergic signaling. Purinergic Signalling, 2021, 17, 385-392.	2.2	3

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19	Astrocytic processes: from tripartite synapses to the active milieu. Trends in Neurosciences, 2021, 44, 781-792.	8.6	130
20	Astrocytes monitor cerebral perfusion and control systemic circulation to maintain brain blood flow. Nature Communications, 2020, 11, 131.	12.8	137
21	Physiology of Astroglial Excitability. Function, 2020, 1, zqaa016.	2.3	48
22	Circadian Modulation of Neurons and Astrocytes Controls Synaptic Plasticity in Hippocampal Area CA1. Cell Reports, 2020, 33, 108255.	6.4	45
23	Purinergic Receptors in Basal Ganglia Diseases: Shared Molecular Mechanisms between Huntingtonâ€™s and Parkinsonâ€™s Disease. Neuroscience Bulletin, 2020, 36, 1299-1314.	2.9	24
24	Making sense of astrocytic calcium signals â€" from acquisition to interpretation. Nature Reviews Neuroscience, 2020, 21, 551-564.	10.2	131
25	Tonic GABA_AConductance Favors Spike-Timing-Dependent over Theta-Burst-Induced Long-Term Potentiation in the Hippocampus. Journal of Neuroscience, 2020, 40, 4266-4276.	3.6	12
26	Caloric restriction triggers morphofunctional remodeling of astrocytes and enhances synaptic plasticity in the mouse hippocampus. Cell Death and Disease, 2020, 11, 208.	6.3	42
27	TASK-3: New Target for Pain-Relief. Neuroscience Bulletin, 2020, 36, 951-954.	2.9	2
28	Astroglial Ca2+ signals trigger pathological behaviour in optogenetic mouse. Cell Calcium, 2019, 82, 102062.	2.4	0
29	Astroglial atrophy in Alzheimerâ€™s disease. Pflugers Archiv European Journal of Physiology, 2019, 471, 1247-1261.	2.8	95
30	Morphological profile determines the frequency of spontaneous calcium events in astrocytic processes. Glia, 2019, 67, 246-262.	4.9	50
31	Spatiotemporal pattern of calcium activity in astrocytic network. Cell Calcium, 2019, 78, 15-25.	2.4	62
32	Activity-dependent changes in transporter and potassium currents in hippocampal astrocytes. Brain Research Bulletin, 2018, 136, 37-43.	3.0	24
33	CalciumCV: Computer Vision Software for Calcium Signaling in Astrocytes. Lecture Notes in Computer Science, 2018, , 168-179.	1.3	6
34	Astrocytic Coverage of Dendritic Spines, Dendritic Shafts, and Axonal Boutons in Hippocampal Neuropil. Frontiers in Cellular Neuroscience, 2018, 12, 248.	3.7	80
35	Astrocytic Atrophy Following Status Epilepticus Parallels Reduced Ca2+ Activity and Impaired Synaptic Plasticity in the Rat Hippocampus. Frontiers in Molecular Neuroscience, 2018, 11, 215.	2.9	73
36	Dopamine elevates and lowers astroglial Ca²⁺ through distinct pathways depending on local synaptic circuitry. Glia, 2017, 65, 447-459.	4.9	75

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37	Cytotoxic effects of upconversion nanoparticles in primary hippocampal cultures. RSC Advances, 2016, 6, 33656-33665.	3.6	18
38	The Ionic Mechanisms Regulating Astrocytic Calcium Dynamic. Sovremennye Tehnologii V Medicine, 2016, 8, 191-197.	1.1	0
39	The Role of the Brain Extracellular Matrix in Synaptic Plasticity After Brain Injuries (Review). Sovremennye Tehnologii V Medicine, 2016, 8, 260-268.	1.1	0
40	Model of self-oscillations in a neuron generator under the action of an active medium. JETP Letters, 2015, 102, 624-627.	1.4	3
41	Dendrite and Axon Specific Geometrical Transformation in Neurite Development. Frontiers in Computational Neuroscience, 2015, 9, 156.	2.1	5
42	The Role of Energy Substrates in Astrocyte Calcium Activity of Rat Hippocampus in Early Postnatal Ontogenesis. Sovremennye Tehnologii V Medicine, 2015, 7, 14-19.	1.1	5
43	Tonic GABA _A conductance bidirectionally controls interneuron firing pattern and synchronization in the CA3 hippocampal network. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 504-509.	7.1	56
44	Denoising of two-photon fluorescence images with Block-Matching 3D filtering. Methods, 2014, 68, 308-316.	3.8	18
45	Spatiotemporal calcium dynamics in single astrocytes and its modulation by neuronal activity. Cell Calcium, 2014, 55, 119-129.	2.4	61
46	Astrocytic Ca2+ signals are required for the functional integrity of tripartite synapses. Molecular Brain, 2013, 6, 6.	2.6	107
47	Retrograde Synaptic Signaling Mediated by K+ Efflux through Postsynaptic NMDA Receptors. Cell Reports, 2013, 5, 941-951.	6.4	68
48	Subcellular location of astrocytic calcium stores favors extrasynaptic neuronâ€“astrocyte communication. Cell Calcium, 2013, 54, 343-349.	2.4	114
49	GABA-Independent GABA_AReceptor Openings Maintain Tonic Currents. Journal of Neuroscience, 2013, 33, 3905-3914.	3.6	85
50	A functional role for both Î³â€aminobutyric acid (GABA) transporterâ€1 and GABA transporterâ€3 in the modulation of extracellular GABA and GABAergic tonic conductances in the rat hippocampus. Journal of Physiology, 2013, 591, 2429-2441.	2.9	118
51	Different transporter systems regulate extracellular GABA from vesicular and non-vesicular sources. Frontiers in Cellular Neuroscience, 2013, 7, 23.	3.7	54
52	Low micromolar Ba2+ potentiates glutamate transporter current in hippocampal astrocytes. Frontiers in Cellular Neuroscience, 2013, 7, 135.	3.7	15
53	Tonic GABAA conductance decreases membrane time constant and increases EPSP-spike precision in hippocampal pyramidal neurons. Frontiers in Neural Circuits, 2013, 7, 205.	2.8	26
54	Bi-directional astrocytic regulation of neuronal activity within a network. Frontiers in Computational Neuroscience, 2012, 6, 92.	2.1	61

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55	Backpropagating Action Potentials Enable Detection of Extrasynaptic Glutamate by NMDA Receptors. Cell Reports, 2012, 1, 495-505.	6.4	54
56	Modulation of Oscillatory Synchronization in an Interneuronal Network under the Influence of Tonic GABA-ergic Inhibition: a Model Study. Neurophysiology, 2011, 42, 318-324.	0.3	2
57	Network with shunting synapses as a non-linear frequency modulator. Neural Networks, 2011, 24, 407-416.	5.9	5
58	Tonic excitation or inhibition is set by GABAA conductance in hippocampal interneurons. Nature Communications, 2011, 2, 376.	12.8	112
59	Secondâ€harmonic generation voltage imaging at subcellular resolution in rat hippocampal slices. Journal of Biophotonics, 2010, 3, 784-790.	2.3	7
60	Optical bioimaging and neuroimaging: from whole-body inspection to brain sensing. Journal of Biophotonics, 2010, 3, 741-742.	2.3	0
61	Neural Cell Adhesion Molecule-Associated Polysialic Acid Regulates Synaptic Plasticity and Learning by Restraining the Signaling through GluN2B-Containing NMDA Receptors. Journal of Neuroscience, 2010, 30, 4171-4183.	3.6	103
62	Astrocytic IP3-mediated Ca2+ signaling is required for functional integrity of tripartite synapse. Neuroscience Research, 2010, 68, e243.	1.9	0
63	STATE AND PARAMETER ESTIMATION FOR CANONIC MODELS OF NEURAL OSCILLATORS. International Journal of Neural Systems, 2010, 20, 193-207.	5.2	16
64	Outwardly Rectifying Tonically Active GABA_AReceptors in Pyramidal Cells Modulate Neuronal Offset, Not Gain. Journal of Neuroscience, 2009, 29, 15341-15350.	3.6	111
65	Regulation of Excitability by Extrasynaptic GABAA Receptors. , 2008, 44, 29-48.		90
66	Can diffuse extrasynaptic signaling form a guiding template?. Neurochemistry International, 2008, 52, 31-33.	3.8	21
67	Cholinergic Axons Modulate GABAergic Signaling among Hippocampal Interneurons via Postsynaptic Â7 Nicotinic Receptors. Journal of Neuroscience, 2007, 27, 5683-5693.	3.6	68
68	Presynaptic, extrasynaptic and axonal GABAA receptors in the CNS: where and why?. Progress in Biophysics and Molecular Biology, 2005, 87, 33-46.	2.9	193
69	Diffusional extrasynaptic neurotransmission via glutamate and GABA. Neuroscience and Behavioral Physiology, 2005, 35, 253-266.	0.4	34
70	Multiple and Plastic Receptors Mediate Tonic GABAA Receptor Currents in the Hippocampus. Journal of Neuroscience, 2005, 25, 10016-10024.	3.6	227
71	The Effects of Activation of Kainate Receptors on Tonic and Phasic Gabaergic Inhibition in Interneurons in Field Ca1 of Guinea Pig Hippocampus Slices. Neuroscience and Behavioral Physiology, 2004, 34, 123-130.	0.4	2
72	Tonically active GABAA receptors: modulating gain and maintaining the tone. Trends in Neurosciences, 2004, 27, 262-269.	8.6	698

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73	GABA uptake regulates cortical excitability via cell typeâ€“specific tonic inhibition. Nature Neuroscience, 2003, 6, 484-490.	14.8	366
74	Cell Type Specificity of GABAA Receptor Mediated Signaling in the Hippocampus. CNS and Neurological Disorders, 2003, 2, 240-248.	4.3	21
75	Relative picrotoxin insensitivity distinguishes ionotropic GABA receptor-mediated IPSCs in hippocampal interneurons. Neuropharmacology, 2002, 43, 726-736.	4.1	23
76	Glutamatergic Modulation of GABAergic Signaling Among Hippocampal Interneurons: Novel Mechanisms Regulating Hippocampal Excitability. Epilepsia, 2002, 43, 174-178.	5.1	59
77	Title is missing!. Neurophysiology, 2002, 34, 71-80.	0.3	14
78	Epileptiform activity and EPSP-spike potentiation induced in rat hippocampal CA1 slices by repeated high-K+: involvement of ionotropic glutamate receptors and Ca2+/calmodulin-dependent protein kinase II. Neuropharmacology, 2001, 40, 203-211.	4.1	15
79	Kainate receptor-dependent axonal depolarization and action potential initiation in interneurons. Nature Neuroscience, 2001, 4, 718-723.	14.8	142
80	Modulation of GABAergic Signaling among Interneurons by Metabotropic Glutamate Receptors. Neuron, 2000, 25, 663-672.	8.1	170
81	In vivo hippocampal kindling occludes the development of in vitro kindling-like state in CA1 area of rat hippocampal slices. Epilepsy Research, 1999, 38, 75-85.	1.6	5
82	Increases in the threshold for the development of epileptiform activity in field CA1 of Krushinskii-Molodnika rat hippocampal slices as an adaptive protective mechanism. Neuroscience and Behavioral Physiology, 1999, 29, 467-474.	0.4	2
83	Kindling-like state occurring on periodic increases in the extracellular K+ concentration in field CA1 in rat hippocampal slices. Neuroscience and Behavioral Physiology, 1998, 28, 504-512.	0.4	1
84	The decreased susceptibility to the development of in vitro kindling-like state in hippocampal CA1 slices of rats sensitive to audiogenic seizures. Neuroscience Letters, 1997, 230, 187-190.	2.1	12
85	Kindling-like state in rat hippocampal CA1 slices induced by the repeated short-term extracellular K+ increases: the role of L-type Ca2+-channels. Neuroscience Letters, 1997, 223, 177-180.	2.1	17
86	Single cell electrophysiologic recordings in hippocampal slices. Protocol Exchange, 0, , .	0.3	1
87	Circadian Modulation of Neurons and Astrocytes Controls Synaptic Plasticity in Hippocampal Area CA1. SSRN Electronic Journal, 0, , .	0.4	0