Alexandr Chvatal

List of Publications by Year
in descending order

49 papers	2,234 citations	257357 24 h-index	223716 46 g-index
50 all docs	50 docs citations	50 times ranked	2773 citing authors

#	Article	IF	Citations
1	Astroglia in dementia and Alzheimer's disease. Cell Death and Differentiation, 2009, 16, 378-385.	5.0	351
2	REVIEW: Oxytocin: Crossing the Bridge between Basic Science and Pharmacotherapy. CNS Neuroscience and Therapeutics, 2010, 16, e138-56.	1.9	209
3	Extracellular Volume Fraction and Diffusion Characteristics during Progressive Ischemia and Terminal Anoxia in the Spinal Cord of the Rat. Journal of Cerebral Blood Flow and Metabolism, 1994, 14, 301-311.	2.4	169
4	Astrocytic cytoskeletal atrophy in the medial prefrontal cortex of a triple transgenic mouse model of Alzheimerâ€™s disease. Journal of Anatomy, 2012, 221, 252-262.	0.9	131
5	Distinct Populations of Identified Glial Cells in the Developing Rat Spinal Cord Slice: Ion Channel Properties and Cell Morphology. European Journal of Neuroscience, 1995, 7, 129-142.	1.2	102
6	Astrocytes and Glutamate Homoeostasis in Alzheimer's Disease: A Decrease in Glutamine Synthetase, But Not in Glutamate Transporter-1, in the Prefrontal Cortex. ASN Neuro, 2013, 5, AN20130017.	1.5	100
7	Glycine- and GABA-activated Currents in Identified Glial Cells of the Developing Rat Spinal Cord Slice. European Journal of Neuroscience, 1995, 7, 1188-1198.	1.2	86
8	Glial cells and volume transmission in the CNS. Neurochemistry International, 2000, 36, 397-409.	1.9	84
9	Three-dimensional confocal morphometry reveals structural changes in astrocyte morphology in situ. Journal of Neuroscience Research, 2007, 85, 260-271.	1.3	62
10	Effect of elevated K+, hypotonic stress, and cortical spreading depression on astrocyte swelling in GFAP-deficient mice. Glia, 2001, 35, 189-203.	2.5	61
11	The relationship between changes in intrinsic optical signals and cell swelling in rat spinal cord slices. NeuroImage, 2003, 18, 214-230.	2.1	60
12	Cell Death/Proliferation and Alterations in Glial Morphology Contribute to Changes in Diffusivity in the Rat Hippocampus after Hypoxiaâ€"Ischemia. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 894-907.	2.4	59
13	Three-dimensional confocal morphometry ? a new approach for studying dynamic changes in cell morphology in brain slices. Journal of Anatomy, 2007, 210, 671-683.	0.9	53
14	Quantification of astrocyte volume changes during ischemia in situ reveals two populations of astrocytes in the cortex of GFAP/EGFP mice. Journal of Neuroscience Research, 2009, 87, 96-111.	1.3	52
15	Impact of global cerebral ischemia on K+ channel expression and membrane properties of glial cells in the rat hippocampus. Neurochemistry International, 2010, 57, 783-794.	1.9	44
16	Glial depolarization evokes a larger potassium accumulation around oligodendrocytes than around astrocytes in gray matter of rat spinal cord slices. Journal of Neuroscience Research, 1999, 56, 493-505.	1.3	42
17	K+ and pH homeostasis in the developing rat spinal cord is impaired by early postnatal X-irradiation. Brain Research, 1992, 594, 19-30.	1.1	35
18	Changes in glial K+ currents with decreased extracellular volume in developing rat white matter. , 1997, 49, 98-106.		35

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19	Voltage-dependent potassium currents in hypertrophied rat astrocytes after a cortical stab wound. Glia, 2004, 48, 311-326.	2.5	34
20	Extracellular ionic and volume changes: The role in gliaâ€"Neuron interaction. Journal of Chemical Neuroanatomy, 1993, 6, 247-260.	1.0	33
21	Glutamate, NMDA, and AMPA Induced Changes in Extracellular Space Volume and Tortuosity in the Rat Spinal Cord. Journal of Cerebral Blood Flow and Metabolism, 2001, 21, 1077-1089.	2.4	33
22	NMDA Receptors in Astrocytes. Neurochemical Research, 2020, 45, 122-133.	1.6	33
23	Electrophysiological characterization of neural stem/progenitor cells during in vitro differentiation: Study with an immortalized neuroectodermal cell line. Journal of Neuroscience Research, 2007, 85, 1606-1617.	1.3	30
24	High extracellular K+ evokes changes in voltage-dependent K+ and Na+ currents and volume regulation in astrocytes. Pflugers Archiv European Journal of Physiology, 2007, 453, 839-849.	1.3	30
25	Glial influence on neuronal signaling. Progress in Brain Research, 2000, 125, 199-216.	0.9	24
26	An Early History of Neuroglial Research: Personalities. Neuroglia (Basel, Switzerland), 2018, 1, 245-281.	0.3	24
27	Effect of steroids on ?-aminobutyrate-induced currents in cultured rat astrocytes. Pflugers Archiv European Journal of Physiology, 1991, 419, 263-266.	1.3	23
28	Effect of osmotic stress on potassium accumulation around glial cells and extracellular space volume in rat spinal cord slices. Journal of Neuroscience Research, 2001, 65, 129-138.	1.3	23
29	Characteristics of activity-dependent potassium accumulation in mammalian peripheral nerve in vitro. Brain Research, 1991, 552, 106-112.	1.1	21
30	Differential calcium signalling in neuronal-glial networks. Frontiers in Bioscience - Landmark, 2009, Volume, 2004.	3.0	20
31	Distinct effects of Sonic hedgehog and Wnt-7a on differentiation of neonatal neural stem/progenitor cells in vitro. Neuroscience, 2010, 171, 693-711.	1.1	19
32	Membrane currents and morphological properties of neurons and glial cells in the spinal cord and filum terminale of the frog. Neuroscience Research, 2001, 40, 23-35.	1.0	18
33	Further studies of electrogenic Na+/HCO3? cotransport in glial cells ofnecturus optic nerve: Regulation of pHi. Glia, 1991, 4, 461-468.	2.5	17
34	Transplantation of embryonic neuroectodermal progenitor cells into the site of a photochemical lesion: Immunohistochemical and electrophysiological analysis. Journal of Neurobiology, 2006, 66, 1084-1100.	3.7	15
35	exchange in glial cells of Necturus optic nerve. Neuroscience Letters, 1989, 107, 167-172.	1.0	14
36	Neural Stem/Progenitor Cells Derived from the Embryonic Dorsal Telencephalon of D6/GFP Mice Differentiate Primarily into Neurons After Transplantation into a Cortical Lesion. Cellular and Molecular Neurobiology, 2010, 30, 199-218.	1.7	13

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37	Changes in extracellular potassium accumulation produced by opioids and naloxone in frog spinal cord: Relation to changes of Na/1b-K pump activity. Neuroscience Letters, 1985, 59, 285-290.	1.0	10
38	Analysis of K+accumulation reveals privileged extracellular region in the vicinity of glial cells in situ. Journal of Neuroscience Research, 2004, 78, 668-682.	1.3	10
39	Discovering the Structure of Nerve Tissue: Part 2: Gabriel Valentin, Robert Remak, and Jan Evangelista PurkynÄ›. Journal of the History of the Neurosciences, 2015, 24, 326-351.	0.1	9
40	Physiology of spontaneous [Ca2+]i oscillations in the isolated vasopressin and oxytocin neurones of the rat supraoptic nucleus. Cell Calcium, 2016, 59, 280-288.	1.1	8
41	Jan Evangelista PurkynÄ› (1787â€"1869) and his instruments for microscopic research in the field of neuroscience. Journal of the History of the Neurosciences, 2017, 26, 238-256.	0.1	8
42	Discovering the Structure of Nerve Tissue: Part 1: From Marcello Malpighi to Christian Berres. Journal of the History of the Neurosciences, 2015, 24, 268-291.	0.1	7
43	Discovering the structure of nerve tissue: Part 3: From Jan Evangelista PurkynÄ› to Ludwig Mauthner. Journal of the History of the Neurosciences, 2017, 26, 15-49.	0.1	7
44	JiÅ™Ã ProchÃ¡ska (1749â€"1820): Part 1: A Significant Czech Anatomist, Physiologist and Neuroscientist of the Eighteenth Century. Journal of the History of the Neurosciences, 2014, 23, 367-376.	0.1	5
45	JiÅ™Ã ProchÃ¡ska (1749â€"1820): Part 2: â€œDe structura nervorumâ€â€"Studies on a Structure of the Nervous System. Journal of the History of the Neurosciences, 2015, 24, 1-25.	0.1	5
46	Sodium-calcium exchanger and R-type Ca2+ channels mediate spontaneous [Ca2+]i oscillations in magnocellular neurones of the rat supraoptic nucleus. Cell Calcium, 2016, 59, 289-298.	1.1	4
47	Vincenc Alexandr BohdÃ¡lek (1801â€"1883): Czech anatomist and neuroscientist of the nineteenth century. Journal of the History of the Neurosciences, 2017, 26, 125-139.	0.1	2
48	pH, potassium, calcium and volume changes in neuronal microenvironment. International Journal of Psychophysiology, 1989, 7, 404-405.	0.5	0
49	The dissertation on pain by Jan KÅ™titel BohÃ¡Ä• published in 1746. Journal of the History of the Neurosciences, 2016, 25, 386-407.	0.1	0