Alexandr Chvatal

List of Publications by Year in Descending Order

49 papers	1,906 citations	23 h-index	43 g-index
50 ext. papers	2,065 ext. citations	4.1 avg, IF	4.54 L-index

#	Paper	IF	Citations
49	NMDA Receptors in Astrocytes. *Neurochemical Research*, **2020**, 45, 122-133	4.6	12
48	An Early History of Neuroglial Research: Personalities. *Neuroglia (Basel, Switzerland)*, **2018**, 1, 245-281		12
47	Discovering the structure of nerve tissue: Part 3: From Jan Evangelista Purkyně to Ludwig Mauthner. *Journal of the History of the Neurosciences*, **2017**, 26, 15-49	0.7	5
46	Vincenc Alexandr Bohdálek (1801-1883): Czech anatomist and neuroscientist of the nineteenth century. *Journal of the History of the Neurosciences*, **2017**, 26, 125-139	0.7	2
45	Jan Evangelista Purkyně (1787-1869) and his instruments for microscopic research in the field of neuroscience. *Journal of the History of the Neurosciences*, **2017**, 26, 238-256	0.7	6
44	The dissertation on pain by Jan Kštitel Bohuš published in 1746. *Journal of the History of the Neurosciences*, **2016**, 25, 386-407	0.7	
43	Sodium-calcium exchanger and R-type Ca(2+) channels mediate spontaneous [Ca(2+)]i oscillations in magnocellular neurones of the rat supraoptic nucleus. *Cell Calcium*, **2016**, 59, 289-98	4	4
42	Physiology of spontaneous [Ca(2+)]i oscillations in the isolated vasopressin and oxytocin neurones of the rat supraoptic nucleus. *Cell Calcium*, **2016**, 59, 280-8	4	8
41	Discovering the Structure of Nerve Tissue: Part 2: Gabriel Valentin, Robert Remak, and Jan Evangelista Purkyně. *Journal of the History of the Neurosciences*, **2015**, 24, 326-51	0.7	6
40	Jiří Prochaska (1749-1820): Part 2: "De structura nervorum"--studies on a structure of the nervous system. *Journal of the History of the Neurosciences*, **2015**, 24, 1-25	0.7	5
39	Discovering the structure of nerve tissue: part 1: from Marcello Malpighi to Christian Berres. *Journal of the History of the Neurosciences*, **2015**, 24, 268-91	0.7	5
38	Jiří Prochaska (1749-1820): part 1: a significant Czech anatomist, physiologist and neuroscientist of the eighteenth century. *Journal of the History of the Neurosciences*, **2014**, 23, 367-76	0.7	4
37	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, 273-82	5.3	76
36	Astrocytic cytoskeletal atrophy in the medial prefrontal cortex of a triple transgenic mouse model of Alzheimer's disease. *Journal of Anatomy*, **2012**, 221, 252-62	2.9	105
35	Cell death/proliferation and alterations in glial morphology contribute to changes in diffusivity in the rat hippocampus after hypoxia-ischemia. *Journal of Cerebral Blood Flow and Metabolism*, **2011**, 31, 894-907	7.3	48
34	Impact of global cerebral ischemia on K+ channel expression and membrane properties of glial cells in the rat hippocampus. *Neurochemistry International*, **2010**, 57, 783-94	4.4	37
33	Distinct effects of sonic hedgehog and Wnt-7a on differentiation of neonatal neural stem/progenitor cells in vitro. *Neuroscience*, **2010**, 171, 693-711	3.9	17

32	REVIEW: Oxytocin: Crossing the bridge between basic science and pharmacotherapy. *CNS Neuroscience and Therapeutics*, **2010**, 16, e138-56	6.8	168
31	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	4.6	11
30	Differential calcium signalling in neuronal-glial networks. *Frontiers in Bioscience - Landmark*, **2009**, 14, 2004-16	2.8	17
29	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	4.4	46
28	Astroglia in dementia and Alzheimer's disease. *Cell Death and Differentiation*, **2009**, 16, 378-85	12.7	305
27	Three-dimensional confocal morphometry reveals structural changes in astrocyte morphology in situ. *Journal of Neuroscience Research*, **2007**, 85, 260-71	4.4	52
26	Electrophysiological characterization of neural stem/progenitor cells during in vitro differentiation: study with an immortalized neuroectodermal cell line. *Journal of Neuroscience Research*, **2007**, 85, 1606-17	4.4	26
25	Three-dimensional confocal morphometry - a new approach for studying dynamic changes in cell morphology in brain slices. *Journal of Anatomy*, **2007**, 210, 671-83	2.9	45
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, 839-49	4.6	24
23	Transplantation of embryonic neuroectodermal progenitor cells into the site of a photochemical lesion: immunohistochemical and electrophysiological analysis. *Journal of Neurobiology*, **2006**, 66, 1084-100		12
22	Voltage-dependent potassium currents in hypertrophied rat astrocytes after a cortical stab wound. *Glia*, **2004**, 48, 311-26	9	29
21	Analysis of K+ accumulation reveals privileged extracellular region in the vicinity of glial cells in situ. *Journal of Neuroscience Research*, **2004**, 78, 668-82	4.4	9
20	The relationship between changes in intrinsic optical signals and cell swelling in rat spinal cord slices. *NeuroImage*, **2003**, 18, 214-30	7.9	53
19	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, 129-38	4.4	20
18	Effect of elevated K(+), hypotonic stress, and cortical spreading depression on astrocyte swelling in GFAP-deficient mice. *Glia*, **2001**, 35, 189-203	9	55
17	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, 1077-89	7.3	31
16	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	2.9	18
15	Glial influence on neuronal signaling. *Progress in Brain Research*, **2000**, 125, 199-216	2.9	20

14	Glial cells and volume transmission in the CNS. *Neurochemistry International*, **2000**, 36, 397-409	4.4	74
13	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	4.4	38
12	Changes in glial K+ currents with decreased extracellular volume in developing rat white matter. *Journal of Neuroscience Research*, **1997**, 49, 98-106	4.4	30
11	Glycine- and GABA-activated currents in identified glial cells of the developing rat spinal cord slice. *European Journal of Neuroscience*, **1995**, 7, 1188-98	3.5	78
10	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, 129-42	3.5	96
9	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, 301-11	7.3	154
8	Extracellular ionic and volume changes: the role in glia-neuron interaction. *Journal of Chemical Neuroanatomy*, **1993**, 6, 247-60	3.2	32
7	K+ and pH homeostasis in the developing rat spinal cord is impaired by early postnatal X-irradiation. *Brain Research*, **1992**, 594, 19-30	3.7	34
6	Further studies of electrogenic Na+/HCO3- cotransport in glial cells of Necturus optic nerve: regulation of pHi. *Glia*, **1991**, 4, 461-8	9	15
5	Effect of steroids on gamma-aminobutyrate-induced currents in cultured rat astrocytes. *Pflugers Archiv European Journal of Physiology*, **1991**, 419, 263-6	4.6	21
4	Characteristics of activity-dependent potassium accumulation in mammalian peripheral nerve in vitro. *Brain Research*, **1991**, 552, 106-12	3.7	19
3	Na+/H+ exchange in glial cells of Necturus optic nerve. *Neuroscience Letters*, **1989**, 107, 167-72	3.3	12
2	pH, potassium, calcium and volume changes in neuronal microenvironment. *International Journal of Psychophysiology*, **1989**, 7, 404-405	2.9	
1	Changes in extracellular potassium accumulation produced by opioids and naloxone in frog spinal cord: relation to changes of Na-K pump activity. *Neuroscience Letters*, **1985**, 59, 285-90	3.3	10