

Alexandr Chvatal

List of Publications by Citations

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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	Astroglia in dementia and Alzheimer's disease. <i>Cell Death and Differentiation</i> , 2009 , 16, 378-85	12.7	305
48	REVIEW: Oxytocin: Crossing the bridge between basic science and pharmacotherapy. <i>CNS Neuroscience and Therapeutics</i> , 2010 , 16, e138-56	6.8	168
47	Extracellular volume fraction and diffusion characteristics during progressive ischemia and terminal anoxia in the spinal cord of the rat. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1994 , 14, 301-11	7.3	154
46	Astrocytic cytoskeletal atrophy in the medial prefrontal cortex of a triple transgenic mouse model of Alzheimer's disease. <i>Journal of Anatomy</i> , 2012 , 221, 252-62	2.9	105
45	Distinct populations of identified glial cells in the developing rat spinal cord slice: ion channel properties and cell morphology. <i>European Journal of Neuroscience</i> , 1995 , 7, 129-42	3.5	96
44	Glycine- and GABA-activated currents in identified glial cells of the developing rat spinal cord slice. <i>European Journal of Neuroscience</i> , 1995 , 7, 1188-98	3.5	78
43	Astrocytes and glutamate homeostasis in Alzheimer's disease: a decrease in glutamine synthetase, but not in glutamate transporter-1, in the prefrontal cortex. <i>ASN Neuro</i> , 2013 , 5, 273-82	5.3	76
42	Glial cells and volume transmission in the CNS. <i>Neurochemistry International</i> , 2000 , 36, 397-409	4.4	74
41	Effect of elevated K(+), hypotonic stress, and cortical spreading depression on astrocyte swelling in GFAP-deficient mice. <i>Glia</i> , 2001 , 35, 189-203	9	55
40	The relationship between changes in intrinsic optical signals and cell swelling in rat spinal cord slices. <i>NeuroImage</i> , 2003 , 18, 214-30	7.9	53
39	Three-dimensional confocal morphometry reveals structural changes in astrocyte morphology in situ. <i>Journal of Neuroscience Research</i> , 2007 , 85, 260-71	4.4	52
38	Cell death/proliferation and alterations in glial morphology contribute to changes in diffusivity in the rat hippocampus after hypoxia-ischemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2011 , 31, 894-907	7.3	48
37	Quantification of astrocyte volume changes during ischemia in situ reveals two populations of astrocytes in the cortex of GFAP/EGFP mice. <i>Journal of Neuroscience Research</i> , 2009 , 87, 96-111	4.4	46
36	Three-dimensional confocal morphometry - a new approach for studying dynamic changes in cell morphology in brain slices. <i>Journal of Anatomy</i> , 2007 , 210, 671-83	2.9	45
35	Glial depolarization evokes a larger potassium accumulation around oligodendrocytes than around astrocytes in gray matter of rat spinal cord slices. <i>Journal of Neuroscience Research</i> , 1999 , 56, 493-505	4.4	38
34	Impact of global cerebral ischemia on K+ channel expression and membrane properties of glial cells in the rat hippocampus. <i>Neurochemistry International</i> , 2010 , 57, 783-94	4.4	37
33	K+ and pH homeostasis in the developing rat spinal cord is impaired by early postnatal X-irradiation. <i>Brain Research</i> , 1992 , 594, 19-30	3.7	34

32	Extracellular ionic and volume changes: the role in glia-neuron interaction. <i>Journal of Chemical Neuroanatomy</i> , 1993 , 6, 247-60	3.2	32
31	Glutamate, NMDA, and AMPA induced changes in extracellular space volume and tortuosity in the rat spinal cord. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2001 , 21, 1077-89	7.3	31
30	Changes in glial K ⁺ currents with decreased extracellular volume in developing rat white matter. <i>Journal of Neuroscience Research</i> , 1997 , 49, 98-106	4.4	30
29	Voltage-dependent potassium currents in hypertrophied rat astrocytes after a cortical stab wound. <i>Glia</i> , 2004 , 48, 311-26	9	29
28	Electrophysiological characterization of neural stem/progenitor cells during in vitro differentiation: study with an immortalized neuroectodermal cell line. <i>Journal of Neuroscience Research</i> , 2007 , 85, 1606-17	4.4	26
27	High extracellular K ⁽⁺⁾ evokes changes in voltage-dependent K ⁽⁺⁾ and Na ⁽⁺⁾ currents and volume regulation in astrocytes. <i>Pflugers Archiv European Journal of Physiology</i> , 2007 , 453, 839-49	4.6	24
26	Effect of steroids on gamma-aminobutyrate-induced currents in cultured rat astrocytes. <i>Pflugers Archiv European Journal of Physiology</i> , 1991 , 419, 263-6	4.6	21
25	Effect of osmotic stress on potassium accumulation around glial cells and extracellular space volume in rat spinal cord slices. <i>Journal of Neuroscience Research</i> , 2001 , 65, 129-38	4.4	20
24	Glial influence on neuronal signaling. <i>Progress in Brain Research</i> , 2000 , 125, 199-216	2.9	20
23	Characteristics of activity-dependent potassium accumulation in mammalian peripheral nerve in vitro. <i>Brain Research</i> , 1991 , 552, 106-12	3.7	19
22	Membrane currents and morphological properties of neurons and glial cells in the spinal cord and filum terminale of the frog. <i>Neuroscience Research</i> , 2001 , 40, 23-35	2.9	18
21	Distinct effects of sonic hedgehog and Wnt-7a on differentiation of neonatal neural stem/progenitor cells in vitro. <i>Neuroscience</i> , 2010 , 171, 693-711	3.9	17
20	Differential calcium signalling in neuronal-glia networks. <i>Frontiers in Bioscience - Landmark</i> , 2009 , 14, 2004-16	2.8	17
19	Further studies of electrogenic Na ⁺ /HCO ₃ ⁻ cotransport in glial cells of Necturus optic nerve: regulation of pHi. <i>Glia</i> , 1991 , 4, 461-8	9	15
18	Transplantation of embryonic neuroectodermal progenitor cells into the site of a photochemical lesion: immunohistochemical and electrophysiological analysis. <i>Journal of Neurobiology</i> , 2006 , 66, 1084-100		12
17	Na ⁺ /H ⁺ exchange in glial cells of Necturus optic nerve. <i>Neuroscience Letters</i> , 1989 , 107, 167-72	3.3	12
16	NMDA Receptors in Astrocytes. <i>Neurochemical Research</i> , 2020 , 45, 122-133	4.6	12
15	An Early History of Neuroglial Research: Personalities. <i>Neuroglia (Basel, Switzerland)</i> , 2018 , 1, 245-281		12

14	Neural stem/progenitor cells derived from the embryonic dorsal telencephalon of D6/GFP mice differentiate primarily into neurons after transplantation into a cortical lesion. <i>Cellular and Molecular Neurobiology</i> , 2010 , 30, 199-218	4.6	11
13	Changes in extracellular potassium accumulation produced by opioids and naloxone in frog spinal cord: relation to changes of Na-K pump activity. <i>Neuroscience Letters</i> , 1985 , 59, 285-90	3.3	10
12	Analysis of K ⁺ accumulation reveals privileged extracellular region in the vicinity of glial cells in situ. <i>Journal of Neuroscience Research</i> , 2004 , 78, 668-82	4.4	9
11	Physiology of spontaneous [Ca ²⁺] _i oscillations in the isolated vasopressin and oxytocin neurones of the rat supraoptic nucleus. <i>Cell Calcium</i> , 2016 , 59, 280-8	4	8
10	Jan Evangelista Purkyně (1787-1869) and his instruments for microscopic research in the field of neuroscience. <i>Journal of the History of the Neurosciences</i> , 2017 , 26, 238-256	0.7	6
9	Discovering the Structure of Nerve Tissue: Part 2: Gabriel Valentin, Robert Remak, and Jan Evangelista Purkyně. <i>Journal of the History of the Neurosciences</i> , 2015 , 24, 326-51	0.7	6
8	Discovering the structure of nerve tissue: Part 3: From Jan Evangelista Purkyně to Ludwig Mauthner. <i>Journal of the History of the Neurosciences</i> , 2017 , 26, 15-49	0.7	5
7	Jiří Procházka (1749-1820): Part 2: "De structura nervorum"--studies on a structure of the nervous system. <i>Journal of the History of the Neurosciences</i> , 2015 , 24, 1-25	0.7	5
6	Discovering the structure of nerve tissue: part 1: from Marcello Malpighi to Christian Berres. <i>Journal of the History of the Neurosciences</i> , 2015 , 24, 268-91	0.7	5
5	Jiří Procházka (1749-1820): part 1: a significant Czech anatomist, physiologist and neuroscientist of the eighteenth century. <i>Journal of the History of the Neurosciences</i> , 2014 , 23, 367-76	0.7	4
4	Sodium-calcium exchanger and R-type Ca ²⁺ channels mediate spontaneous [Ca ²⁺] _i oscillations in magnocellular neurones of the rat supraoptic nucleus. <i>Cell Calcium</i> , 2016 , 59, 289-98	4	4
3	Vincenc Alexandr Bohdál (1801-1883): Czech anatomist and neuroscientist of the nineteenth century. <i>Journal of the History of the Neurosciences</i> , 2017 , 26, 125-139	0.7	2
2	The dissertation on pain by Jan Křitel Bohdál published in 1746. <i>Journal of the History of the Neurosciences</i> , 2016 , 25, 386-407	0.7	
1	pH, potassium, calcium and volume changes in neuronal microenvironment. <i>International Journal of Psychophysiology</i> , 1989 , 7, 404-405	2.9	