Chris J Mcbain

List of Publications by Citations

115 papers	14,187 citations	55 h-index	119 g-index
128 ext. papers	16,125 ext. citations	10.5 avg, IF	6.48 L-index

#	Paper	IF	Citations
115	Glutamate receptor ion channels: structure, regulation, and function. *Pharmacological Reviews*, **2010**, 62, 405-96	22.5	2406
114	N-methyl-D-aspartic acid receptor structure and function. *Physiological Reviews*, **1994**, 74, 723-60	47.9	835
113	The role of the GluR2 subunit in AMPA receptor function and synaptic plasticity. *Neuron*, **2007**, 54, 859-71	13.9	798
112	Kv3 channels: voltage-gated K+ channels designed for high-frequency repetitive firing. *Trends in Neurosciences*, **2001**, 24, 517-26	13.3	568
111	Interneurons unbound. *Nature Reviews Neuroscience*, **2001**, 2, 11-23	13.5	548
110	New insights into the classification and nomenclature of cortical GABAergic interneurons. *Nature Reviews Neuroscience*, **2013**, 14, 202-16	13.5	532
109	Graded reduction of Pafah1b1 (Lis1) activity results in neuronal migration defects and early embryonic lethality. *Nature Genetics*, **1998**, 19, 333-9	36.3	506
108	The hyperpolarization-activated current (Ih) and its contribution to pacemaker activity in rat CA1 hippocampal stratum oriens-alveus interneurones. *Journal of Physiology*, **1996**, 497 (Pt 1), 119-30	3.9	374
107	Hippocampal GABAergic Inhibitory Interneurons. *Physiological Reviews*, **2017**, 97, 1619-1747	47.9	323
106	Activation of metabotropic glutamate receptors differentially affects two classes of hippocampal interneurons and potentiates excitatory synaptic transmission. *Journal of Neuroscience*, **1994**, 14, 4433-45	6.6	265
105	Differential regulation at functionally divergent release sites along a common axon. *Current Opinion in Neurobiology*, **2007**, 17, 366-73	7.6	250
104	Regional variation of extracellular space in the hippocampus. *Science*, **1990**, 249, 674-7	33.3	239
103	Afferent-specific innervation of two distinct AMPA receptor subtypes on single hippocampal interneurons. *Nature Neuroscience*, **1998**, 1, 572-8	25.5	218
102	Differential mechanisms of transmission at three types of mossy fiber synapse. *Journal of Neuroscience*, **2000**, 20, 8279-89	6.6	213
101	A blueprint for the spatiotemporal origins of mouse hippocampal interneuron diversity. *Journal of Neuroscience*, **2011**, 31, 10948-70	6.6	210
100	Developmental expression and functional characterization of the potassium-channel subunit Kv3.1b in parvalbumin-containing interneurons of the rat hippocampus. *Journal of Neuroscience*, **1996**, 16, 506-18	6.6	194
99	Target-specific expression of presynaptic mossy fiber plasticity. *Science*, **1998**, 279, 1368-70	33.3	192

98	Narp regulates homeostatic scaling of excitatory synapses on parvalbumin-expressing interneurons. *Nature Neuroscience*, **2010**, 13, 1090-7	25.5	190
97	Distinct roles for the kainate receptor subunits GluR5 and GluR6 in kainate-induced hippocampal gamma oscillations. *Journal of Neuroscience*, **2004**, 24, 9658-68	6.6	173
96	Interneuron diversity series: containing the detonation--feedforward inhibition in the CA3 hippocampus. *Trends in Neurosciences*, **2003**, 26, 631-40	13.3	170
95	Frequency-dependent regulation of rat hippocampal somato-dendritic excitability by the K+ channel subunit Kv2.1. *Journal of Physiology*, **2000**, 522 Pt 1, 19-31	3.9	165
94	Selective expression of ErbB4 in interneurons, but not pyramidal cells, of the rodent hippocampus. *Journal of Neuroscience*, **2009**, 29, 12255-64	6.6	164
93	Heterogeneity of synaptic glutamate receptors on CA3 stratum radiatum interneurones of rat hippocampus. *Journal of Physiology*, **1993**, 462, 373-92	3.9	160
92	mGluR7 is a metaplastic switch controlling bidirectional plasticity of feedforward inhibition. *Neuron* , **2005**, 46, 89-102	13.9	158
91	Passive propagation of LTD to stratum oriens-alveus inhibitory neurons modulates the temporoammonic input to the hippocampal CA1 region. *Neuron*, **1995**, 15, 137-45	13.9	157
90	Potassium conductances underlying repolarization and after-hyperpolarization in rat CA1 hippocampal interneurones. *Journal of Physiology*, **1995**, 488 (Pt 3), 661-72	3.9	157
89	Distinct NMDA receptors provide differential modes of transmission at mossy fiber-interneuron synapses. *Neuron*, **2002**, 33, 921-33	13.9	130
88	Somatodendritic Kv7/KCNQ/M channels control interspike interval in hippocampal interneurons. *Journal of Neuroscience*, **2006**, 26, 12325-38	6.6	126
87	Asynchronous transmitter release from cholecystokinin-containing inhibitory interneurons is widespread and target-cell independent. *Journal of Neuroscience*, **2009**, 29, 11112-22	6.6	125
86	Hippocampal abnormalities and enhanced excitability in a murine model of human lissencephaly. *Journal of Neuroscience*, **2000**, 20, 2439-50	6.6	121
85	Long-term potentiation in distinct subtypes of hippocampal nonpyramidal neurons. *Journal of Neuroscience*, **1996**, 16, 5334-43	6.6	121
84	Common origins of hippocampal Ivy and nitric oxide synthase expressing neurogliaform cells. *Journal of Neuroscience*, **2010**, 30, 2165-76	6.6	120
83	Structural requirements for activation of the glycine coagonist site of N-methyl-D-aspartate receptors expressed in Xenopus oocytes. *Molecular Pharmacology*, **1989**, 36, 556-65	4.3	117
82	Pentraxins coordinate excitatory synapse maturation and circuit integration of parvalbumin interneurons. *Neuron*, **2015**, 85, 1257-72	13.9	112
81	GABAergic input onto CA3 hippocampal interneurons remains shunting throughout development. *Journal of Neuroscience*, **2006**, 26, 11720-5	6.6	112

80	Compartmentalized Ca(2+) channel regulation at divergent mossy-fiber release sites underlies target cell-dependent plasticity. *Neuron*, **2006**, 52, 497-510	13.9	97
79	Quantal transmission at mossy fibre targets in the CA3 region of the rat hippocampus. *Journal of Physiology*, **2004**, 554, 175-93	3.9	97
78	GABA B receptor modulation of excitatory and inhibitory synaptic transmission onto rat CA3 hippocampal interneurons. *Journal of Physiology*, **2003**, 546, 439-53	3.9	96
77	Cell type-specific dependence of muscarinic signalling in mouse hippocampal stratum oriens interneurones. *Journal of Physiology*, **2006**, 570, 595-610	3.9	93
76	H2 histamine receptor-phosphorylation of Kv3.2 modulates interneuron fast spiking. *Nature Neuroscience*, **2000**, 3, 791-8	25.5	90
75	Glutamatergic synapses onto hippocampal interneurons: precision timing without lasting plasticity. *Trends in Neurosciences*, **1999**, 22, 228-35	13.3	90
74	Developmental expression of Ca2+-permeable AMPA receptors underlies depolarization-induced long-term depression at mossy fiber CA3 pyramid synapses. *Journal of Neuroscience*, **2007**, 27, 11651-62	6.6	85
73	NPTX2 and cognitive dysfunction in Alzheimer's Disease. *ELife*, **2017**, 6,	8.9	82
72	Dual origins of functionally distinct O-LM interneurons revealed by differential 5-HT(3A)R expression. *Nature Neuroscience*, **2013**, 16, 1598-607	25.5	81
71	Neurogliaform cells in cortical circuits. *Nature Reviews Neuroscience*, **2015**, 16, 458-68	13.5	80
70	Two Loci of expression for long-term depression at hippocampal mossy fiber-interneuron synapses. *Journal of Neuroscience*, **2004**, 24, 2112-21	6.6	79
69	M3 muscarinic acetylcholine receptor expression confers differential cholinergic modulation to neurochemically distinct hippocampal basket cell subtypes. *Journal of Neuroscience*, **2010**, 30, 6011-24	6.6	77
68	Developmental origin dictates interneuron AMPA and NMDA receptor subunit composition and plasticity. *Nature Neuroscience*, **2013**, 16, 1032-41	25.5	71
67	Neto1 is an auxiliary subunit of native synaptic kainate receptors. *Journal of Neuroscience*, **2011**, 31, 10009-18	6.6	70
66	Target-specific expression of pre- and postsynaptic mechanisms. *Journal of Physiology*, **2000**, 525 Pt 1, 41-51	3.9	70
65	Differential mechanisms of transmission and plasticity at mossy fiber synapses. *Progress in Brain Research*, **2008**, 169, 225-40	2.9	64
64	Muscarinic receptor activation tunes mouse stratum oriens interneurones to amplify spike reliability. *Journal of Physiology*, **2006**, 571, 555-62	3.9	62
63	Developmental expression of potassium-channel subunit Kv3.2 within subpopulations of mouse hippocampal inhibitory interneurons. *Hippocampus*, **2002**, 12, 137-48	3.5	59

62	Voltage-gated potassium currents in stratum oriens-alveus inhibitory neurones of the rat CA1 hippocampus. *Journal of Physiology*, **1995**, 488 (Pt 3), 647-60	3.9	58
61	State-dependent cAMP sensitivity of presynaptic function underlies metaplasticity in a hippocampal feedforward inhibitory circuit. *Neuron*, **2008**, 60, 980-7	13.9	57
60	Presynaptic plasticity: targeted control of inhibitory networks. *Current Opinion in Neurobiology*, **2009**, 19, 254-62	7.6	55
59	GluN2D-Containing N-methyl-d-Aspartate Receptors Mediate Synaptic Transmission in Hippocampal Interneurons and Regulate Interneuron Activity. *Molecular Pharmacology*, **2016**, 90, 689-702	4.3	53
58	Snap-25 is polarized to axons and abundant along the axolemma: an immunogold study of intact neurons. *Journal of Neurocytology*, **2000**, 29, 67-77		51
57	Diverse roles for ionotropic glutamate receptors on inhibitory interneurons in developing and adult brain. *Journal of Physiology*, **2016**, 594, 5471-90	3.9	51
56	Depolarization-induced long-term depression at hippocampal mossy fiber-CA3 pyramidal neuron synapses. *Journal of Neuroscience*, **2003**, 23, 9786-95	6.6	48
55	Hippocampal inhibitory neuron activity in the elevated potassium model of epilepsy. *Journal of Neurophysiology*, **1994**, 72, 2853-63	3.2	48
54	Neurogliaform cells dynamically regulate somatosensory integration via synapse-specific modulation. *Nature Neuroscience*, **2013**, 16, 13-5	25.5	46
53	Control of CA3 output by feedforward inhibition despite developmental changes in the excitation-inhibition balance. *Journal of Neuroscience*, **2010**, 30, 15628-37	6.6	45
52	Target-cell-dependent plasticity within the mossy fibre-CA3 circuit reveals compartmentalized regulation of presynaptic function at divergent release sites. *Journal of Physiology*, **2008**, 586, 1495-502	3.9	45
51	Molecular Dissection of Neuroligin 2 and Slitrk3 Reveals an Essential Framework for GABAergic Synapse Development. *Neuron*, **2017**, 96, 808-826.e8	13.9	44
50	Cholinergic modulation amplifies the intrinsic oscillatory properties of CA1 hippocampal cholecystokinin-positive interneurons. *Journal of Physiology*, **2011**, 589, 609-27	3.9	44
49	Viral manipulation of functionally distinct interneurons in mice, non-human primates and humans. *Nature Neuroscience*, **2020**, 23, 1629-1636	25.5	44
48	Optimizing Nervous System-Specific Gene Targeting with Cre Driver Lines: Prevalence of Germline Recombination and Influencing Factors. *Neuron*, **2020**, 106, 37-65.e5	13.9	43
47	Persistent inhibitory circuit defects and disrupted social behaviour following in utero exogenous cannabinoid exposure. *Molecular Psychiatry*, **2017**, 22, 56-67	15.1	42
46	Neto auxiliary protein interactions regulate kainate and NMDA receptor subunit localization at mossy fiber-CA3 pyramidal cell synapses. *Journal of Neuroscience*, **2014**, 34, 622-8	6.6	42
45	CNQX increases spontaneous inhibitory input to CA3 pyramidal neurones in neonatal rat hippocampal slices. *Brain Research*, **1992**, 592, 255-60	3.7	41

44	The emerging role of GABAB receptors as regulators of network dynamics: fast actions from a ?slow? receptor?. *Current Opinion in Neurobiology*, **2014**, 26, 15-21	7.6	39
43	Distinct roles of GABAB1a- and GABAB1b-containing GABAB receptors in spontaneous and evoked termination of persistent cortical activity. *Journal of Physiology*, **2013**, 591, 835-43	3.9	39
42	Fast gamma oscillations are generated intrinsically in CA1 without the involvement of fast-spiking basket cells. *Journal of Neuroscience*, **2015**, 35, 3616-24	6.6	36
41	Shisa7 is a GABA receptor auxiliary subunit controlling benzodiazepine actions. *Science*, **2019**, 366, 246-250	3.3	36
40	Presynaptic kainate receptor activation preserves asynchronous GABA release despite the reduction in synchronous release from hippocampal cholecystokinin interneurons. *Journal of Neuroscience*, **2010**, 30, 11202-9	6.6	36
39	TASK-like conductances are present within hippocampal CA1 stratum oriens interneuron subpopulations. *Journal of Neuroscience*, **2006**, 26, 7362-7	6.6	36
38	Behavioral state-dependent modulation of distinct interneuron subtypes and consequences for circuit function. *Current Opinion in Neurobiology*, **2014**, 29, 118-25	7.6	35
37	Activation of kinetically distinct synaptic conductances on inhibitory interneurons by electrotonically overlapping afferents. *Neuron*, **2002**, 35, 161-71	13.9	32
36	5-Hydroxytryptamine1A receptor-activation hyperpolarizes pyramidal cells and suppresses hippocampal gamma oscillations via Kir3 channel activation. *Journal of Physiology*, **2014**, 592, 4187-99	3.9	31
35	Neto Auxiliary Subunits Regulate Interneuron Somatodendritic and Presynaptic Kainate Receptors to Control Network Inhibition. *Cell Reports*, **2017**, 20, 2156-2168	10.6	29
34	Afferent specific role of NMDA receptors for the circuit integration of hippocampal neurogliaform cells. *Nature Communications*, **2017**, 8, 152	17.4	25
33	Interneurons Differentially Contribute to Spontaneous Network Activity in the Developing Hippocampus Dependent on Their Embryonic Lineage. *Journal of Neuroscience*, **2016**, 36, 2646-62	6.6	25
32	Neocortical Projection Neurons Instruct Inhibitory Interneuron Circuit Development in a Lineage-Dependent Manner. *Neuron*, **2019**, 102, 960-975.e6	13.9	24
31	Hippocampal inhibitory neuron activity in the elevated potassium model of epilepsy. *Journal of Neurophysiology*, **1995**, 73, 2853-63	3.2	21
30	Synaptic plasticity in hippocampal interneurons? A commentary. *Canadian Journal of Physiology and Pharmacology*, **1997**, 75, 488-494	2.4	20
29	Two temporally overlapping "delayed-rectifiers" determine the voltage-dependent potassium current phenotype in cultured hippocampal interneurons. *Journal of Neurophysiology*, **1996**, 76, 1477-90	3.2	19
28	Structure, Function, and Pharmacology of Glutamate Receptor Ion Channels. *Pharmacological Reviews*, **2021**, 73, 298-487	22.5	19
27	Dopamine suppresses persistent network activity via D(1) -like dopamine receptors in rat medial entorhinal cortex. *European Journal of Neuroscience*, **2013**, 37, 1242-7	3.5	16

26	Life-long epigenetic programming of cortical architecture by maternal ‘Western’ diet during pregnancy. *Molecular Psychiatry*, **2020**, 25, 22-36	15.1	14
25	Functional Differentiation of Cholecystokinin-Containing Interneurons Destined for the Cerebral Cortex. *Cerebral Cortex*, **2017**, 27, 2453-2468	5.1	12
24	Paradoxical network excitation by glutamate release from VGluT3 GABAergic interneurons. *ELife*, **2020**, 9,	8.9	11
23	An update on cholinergic regulation of cholecystokinin-expressing basket cells. *Journal of Physiology*, **2012**, 590, 695-702	3.9	10
22	Synaptic plasticity in hippocampal interneurons? A commentary. *Canadian Journal of Physiology and Pharmacology*, **1997**, 75, 488-94	2.4	8
21	The Role of AMPARs in the Maturation and Integration of Caudal Ganglionic Eminence-Derived Interneurons into Developing Hippocampal Microcircuits. *Scientific Reports*, **2019**, 9, 5435	4.9	7
20	Navigating the circuitry of the brain’s GPS system: Future challenges for neurophysiologists. *Hippocampus*, **2015**, 25, 736-43	3.5	6
19	Activity-dependent tuning of intrinsic excitability in mouse and human neurogliaform cells. *ELife*, **2020**, 9,	8.9	6
18	AMPA receptor deletion in developing MGE-derived hippocampal interneurons causes a redistribution of excitatory synapses and attenuates postnatal network oscillatory activity. *Scientific Reports*, **2020**, 10, 1333	4.9	5
17	Loss of habenular Prkar2a reduces hedonic eating and increases exercise motivation. *JCI Insight*, **2020**, 5,	9.9	4
16	The Hyperpolarization-Activated Cation Current Ih: The Missing Link Connecting Cannabinoids to Cognition. *Neuron*, **2016**, 89, 889-91	13.9	4
15	Emergence of non-canonical parvalbumin-containing interneurons in hippocampus of a murine model of type I lissencephaly. *ELife*, **2020**, 9,	8.9	3
14	Intrinsic electrophysiological properties predict variability in morphology and connectivity among striatal Parvalbumin-expressing Pthlh-cells. *Scientific Reports*, **2020**, 10, 15680	4.9	2
13	Translatome Analyses Using Conditional Ribosomal Tagging in GABAergic Interneurons and Other Sparse Cell Types. *Current Protocols in Neuroscience*, **2020**, 92, e93	2.7	2
12	Hippocampal CA1 pyramidal cells do not receive monosynaptic input from thalamic nucleus reuniens		2
11	Neuroscience. Decoding the neuronal Tower of Babel. *Science*, **2012**, 338, 482-3	33.3	1
10	A biomarker-authenticated model of schizophrenia implicating NPTX2 loss of function. *Science Advances*, **2021**, 7, eabf6935	14.3	1
9	Transient compartmentalization of interneuron dendrites. *Journal of Physiology*, **2003**, 551, 1	3.9	1

8	Aberrant sorting of hippocampal complex pyramidal cells in type I lissencephaly alters topological innervation. *ELife*, **2020**, 9,	8.9	1
7	NMDAR-mediated transcriptional control of gene expression during the development of medial ganglionic eminence-derived interneurons		1
6	Timing isn't everything: opposing roles for perisomatic inhibition. *Neuron*, **2021**, 109, 911-913	13.9	0
5	NMDARs Drive the Expression of Neuropsychiatric Disorder Risk Genes Within GABAergic Interneuron Subtypes in the Juvenile Brain. *Frontiers in Molecular Neuroscience*, **2021**, 14, 712609	6.1	0
4	A versatile viral toolkit for functional discovery in the nervous system. *Cell Reports Methods*, **2022**, 100225		0
3	Exploring the Interneuron Canopy Atop the "Impenetrable Jungle" *Trends in Neurosciences*, **2019**, 42, 237-239	13.3	
2	Cortical inhibitory neuron basket cells: from circuit function to disruption. *Journal of Physiology*, **2012**, 590, 667	3.9	
1	Vesicle Pools of Memory at Mossy Fiber Synapses. *Neuron*, **2020**, 107, 395-396	13.9	