Chris J Mcbain

List of Publications by Year
in descending order

117 papers	17,455 citations	19657 61 h-index	20961 115 g-index
128 all docs	128 docs citations	128 times ranked	16510 citing authors

#	Article	IF	Citations
1	Resilient Hippocampal Gamma Rhythmogenesis and Parvalbumin-Expressing Interneuron Function Before and After Plaque Burden in 5xFAD Alzheimerâ€™s Disease Model. Frontiers in Synaptic Neuroscience, 2022, 14, .	2.5	5
2	The GluN2A Subunit of the NMDA Receptor Modulates the Rate of Functional Maturation in Parvalbuminâ€positive Interneurons. FASEB Journal, 2022, 36, .	0.5	1
3	A versatile viral toolkit for functional discovery in the nervous system. Cell Reports Methods, 2022, , 100225.	2.9	6
4	Timing isnâ€™t everything: opposing roles for perisomatic inhibition. Neuron, 2021, 109, 911-913.	8.1	2
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.	2.9	9
6	Structure, Function, and Pharmacology of Glutamate Receptor Ion Channels. Pharmacological Reviews, 2021, 73, 1469-1658.	16.0	237
7	A biomarker-authenticated model of schizophrenia implicating NPTX2 loss of function. Science Advances, 2021, 7, eabf6935.	10.3	17
8	Life-long epigenetic programming of cortical architecture by maternal â€˜Westernâ€™ diet during pregnancy. Molecular Psychiatry, 2020, 25, 22-36.	7.9	28
9	Vesicle Pools of Memory at Mossy Fiber Synapses. Neuron, 2020, 107, 395-396.	8.1	0
10	Intrinsic electrophysiological properties predict variability in morphology and connectivity among striatal Parvalbumin-expressing Pthlh-cells. Scientific Reports, 2020, 10, 15680.	3.3	5
11	Viral manipulation of functionally distinct interneurons in mice, non-human primates and humans. Nature Neuroscience, 2020, 23, 1629-1636.	14.8	133
12	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.	3.3	7
13	Translatome Analyses Using Conditional Ribosomal Tagging in GABAergic Interneurons and Other Sparse Cell Types. Current Protocols in Neuroscience, 2020, 92, e93.	2.6	5
14	Optimizing Nervous System-Specific Gene Targeting with Cre Driver Lines: Prevalence of Germline Recombination and Influencing Factors. Neuron, 2020, 106, 37-65.e5.	8.1	109
15	Loss of habenular Prkar2a reduces hedonic eating and increases exercise motivation. JCI Insight, 2020, 5, .	5.0	8
16	Paradoxical network excitation by glutamate release from VGluT3+ GABAergic interneurons. ELife, 2020, 9, .	6.0	25
17	Activity-dependent tuning of intrinsic excitability in mouse and human neurogliaform cells. ELife, 2020, 9, .	6.0	29
18	Emergence of non-canonical parvalbumin-containing interneurons in hippocampus of a murine model of type I lissencephaly. ELife, 2020, 9, .	6.0	13

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19	Aberrant sorting of hippocampal complex pyramidal cells in type I lissencephaly alters topological innervation. ELife, 2020, 9, .	6.0	4
20	Shisa7 is a GABA _A receptor auxiliary subunit controlling benzodiazepine actions. Science, 2019, 366, 246-250.	12.6	65
21	Exploring the Interneuron Canopy Atop the â€˜Impenetrable Jungleâ€™. Trends in Neurosciences, 2019, 42, 237-239.	8.6	0
22	Neocortical Projection Neurons Instruct Inhibitory Interneuron Circuit Development in a Lineage-Dependent Manner. Neuron, 2019, 102, 960-975.e6.	8.1	51
23	The Role of AMPARs in the Maturation and Integration of Caudal Ganglionic Eminence-Derived Interneurons into Developing Hippocampal Microcircuits. Scientific Reports, 2019, 9, 5435.	3.3	9
24	Functional Differentiation of Cholecystokinin-Containing Interneurons Destined for the Cerebral Cortex. Cerebral Cortex, 2017, 27, bhw094.	2.9	19
25	Persistent inhibitory circuit defects and disrupted social behaviour following in utero exogenous cannabinoid exposure. Molecular Psychiatry, 2017, 22, 56-67.	7.9	59
26	Molecular Dissection of Neuroligin 2 and Slitrk3 Reveals an Essential Framework for GABAergic Synapse Development. Neuron, 2017, 96, 808-826.e8.	8.1	64
27	Hippocampal GABAergic Inhibitory Interneurons. Physiological Reviews, 2017, 97, 1619-1747.	28.8	601
28	Neto Auxiliary Subunits Regulate Interneuron Somatodendritic and Presynaptic Kainate Receptors to Control Network Inhibition. Cell Reports, 2017, 20, 2156-2168.	6.4	41
29	Afferent specific role of NMDA receptors for the circuit integration of hippocampal neurogliaform cells. Nature Communications, 2017, 8, 152.	12.8	45
30	NPTX2 and cognitive dysfunction in Alzheimerâ€™s Disease. ELife, 2017, 6, .	6.0	146
31	Diverse roles for ionotropic glutamate receptors on inhibitory interneurons in developing and adult brain. Journal of Physiology, 2016, 594, 5471-5490.	2.9	77
32	The Hyperpolarization-Activated Cation Current I h : The Missing Link Connecting Cannabinoids to Cognition. Neuron, 2016, 89, 889-891.	8.1	5
33	Interneurons Differentially Contribute to Spontaneous Network Activity in the Developing Hippocampus Dependent on Their Embryonic Lineage. Journal of Neuroscience, 2016, 36, 2646-2662.	3.6	37
34	GluN2D-Containing N-methyl-d-Aspartate Receptors Mediate Synaptic Transmission in Hippocampal Interneurons and Regulate Interneuron Activity. Molecular Pharmacology, 2016, 90, 689-702.	2.3	84
35	Pentraxins Coordinate Excitatory Synapse Maturation and Circuit Integration of Parvalbumin Interneurons. Neuron, 2015, 85, 1257-1272.	8.1	154
36	Fast Gamma Oscillations Are Generated Intrinsically in CA1 without the Involvement of Fast-Spiking Basket Cells. Journal of Neuroscience, 2015, 35, 3616-3624.	3.6	50

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37	Neurogliaform cells in cortical circuits. Nature Reviews Neuroscience, 2015, 16, 458-468.	10.2	119
38	Navigating the circuitry of the brain's GPS system: Future challenges for neurophysiologists. Hippocampus, 2015, 25, 736-743.	1.9	10
39	GABAergic Signaling in Health and Disease. Neuropharmacology, 2015, 88, 1.	4.1	2
40	5â€Hydroxytryptamine_{1A} receptorâ€activation hyperpolarizes pyramidal cells and suppresses hippocampal gamma oscillations via Kir3 channel activation. Journal of Physiology, 2014, 592, 4187-4199.	2.9	37
41	Neto Auxiliary Protein Interactions Regulate Kainate and NMDA Receptor Subunit Localization at Mossy Fiberâ€"CA3 Pyramidal Cell Synapses. Journal of Neuroscience, 2014, 34, 622-628.	3.6	55
42	The emerging role of GABAB receptors as regulators of network dynamics: fast actions from a â€˜slowâ€™ receptor?. Current Opinion in Neurobiology, 2014, 26, 15-21.	4.2	52
43	Behavioral state-dependent modulation of distinct interneuron subtypes and consequences for circuit function. Current Opinion in Neurobiology, 2014, 29, 118-125.	4.2	44
44	Developmental origin dictates interneuron AMPA and NMDA receptor subunit composition and plasticity. Nature Neuroscience, 2013, 16, 1032-1041.	14.8	92
45	Dopamine suppresses persistent network activity via D₁â€like dopamine receptors in rat medial entorhinal cortex. European Journal of Neuroscience, 2013, 37, 1242-1247.	2.6	21
46	Dual origins of functionally distinct O-LM interneurons revealed by differential 5-HT3AR expression. Nature Neuroscience, 2013, 16, 1598-1607.	14.8	104
47	Neurogliaform cells dynamically regulate somatosensory integration via synapse-specific modulation. Nature Neuroscience, 2013, 16, 13-15.	14.8	60
48	New insights into the classification and nomenclature of cortical GABAergic interneurons. Nature Reviews Neuroscience, 2013, 14, 202-216.	10.2	707
49	Distinct roles of GABA_{B1a}â€•and GABA_{B1b}â€containing GABA_B receptors in spontaneous and evoked termination of persistent cortical activity. Journal of Physiology, 2013, 591, 835-843.	2.9	52
50	Decoding the Neuronal Tower of Babel. Science, 2012, 338, 482-483.	12.6	1
51	Cortical inhibitory neuron basket cells: from circuit function to disruption. Journal of Physiology, 2012, 590, 667-667.	2.9	0
52	An update on cholinergic regulation of cholecystokininâ€expressing basket cells. Journal of Physiology, 2012, 590, 695-702.	2.9	10
53	Cholinergic modulation amplifies the intrinsic oscillatory properties of CA1 hippocampal cholecystokininâ€positive interneurons. Journal of Physiology, 2011, 589, 609-627.	2.9	51
54	Neto1 Is an Auxiliary Subunit of Native Synaptic Kainate Receptors. Journal of Neuroscience, 2011, 31, 10009-10018.	3.6	78

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55	A Blueprint for the Spatiotemporal Origins of Mouse Hippocampal Interneuron Diversity. Journal of Neuroscience, 2011, 31, 10948-10970.	3.6	267
56	Narp regulates homeostatic scaling of excitatory synapses on parvalbumin-expressing interneurons. Nature Neuroscience, 2010, 13, 1090-1097.	14.8	243
57	Common Origins of Hippocampal Ivy and Nitric Oxide Synthase Expressing Neurogliaform Cells. Journal of Neuroscience, 2010, 30, 2165-2176.	3.6	153
58	Presynaptic Kainate Receptor Activation Preserves Asynchronous GABA Release Despite the Reduction in Synchronous Release from Hippocampal Cholecystokinin Interneurons. Journal of Neuroscience, 2010, 30, 11202-11209.	3.6	39
59	M3 Muscarinic Acetylcholine Receptor Expression Confers Differential Cholinergic Modulation to Neurochemically Distinct Hippocampal Basket Cell Subtypes. Journal of Neuroscience, 2010, 30, 6011-6024.	3.6	91
60	Control of CA3 Output by Feedforward Inhibition Despite Developmental Changes in the Excitationâ€“Inhibition Balance. Journal of Neuroscience, 2010, 30, 15628-15637.	3.6	58
61	Glutamate Receptor Ion Channels: Structure, Regulation, and Function. Pharmacological Reviews, 2010, 62, 405-496.	16.0	2,973
62	Selective Expression of ErbB4 in Interneurons, But Not Pyramidal Cells, of the Rodent Hippocampus. Journal of Neuroscience, 2009, 29, 12255-12264.	3.6	200
63	Asynchronous Transmitter Release from Cholecystokinin-Containing Inhibitory Interneurons Is Widespread and Target-Cell Independent. Journal of Neuroscience, 2009, 29, 11112-11122.	3.6	138
64	Presynaptic plasticity: targeted control of inhibitory networks. Current Opinion in Neurobiology, 2009, 19, 254-262.	4.2	64
65	Targetâ€cellâ€dependent plasticity within the mossy fibreâ€“CA3 circuit reveals compartmentalized regulation of presynaptic function at divergent release sites. Journal of Physiology, 2008, 586, 1495-1502.	2.9	51
66	New directions in synaptic and network plasticity â€“ a move away from NMDA receptor mediated plasticity. Journal of Physiology, 2008, 586, 1473-1474.	2.9	4
67	State-Dependent cAMP Sensitivity of Presynaptic Function Underlies Metaplasticity in a Hippocampal Feedforward Inhibitory Circuit. Neuron, 2008, 60, 980-987.	8.1	63
68	Chapter 13 Differential mechanisms of transmission and plasticity at mossy fiber synapses. Progress in Brain Research, 2008, 169, 225-240.	1.4	69
69	Developmental Expression of Ca²⁺-Permeable AMPA Receptors Underlies Depolarization-Induced Long-Term Depression at Mossy Fiberâ€“CA3 Pyramid Synapses. Journal of Neuroscience, 2007, 27, 11651-11662.	3.6	91
70	The Role of the GluR2 Subunit in AMPA Receptor Function and Synaptic Plasticity. Neuron, 2007, 54, 859-871.	8.1	940
71	Differential regulation at functionally divergent release sites along a common axon. Current Opinion in Neurobiology, 2007, 17, 366-373.	4.2	305
72	Compartmentalized Ca2+ Channel Regulation at Divergent Mossy-Fiber Release Sites Underlies Target Cell-Dependent Plasticity. Neuron, 2006, 52, 497-510.	8.1	105

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73	Cell type-specific dependence of muscarinic signalling in mouse hippocampal stratum oriens interneurones. Journal of Physiology, 2006, 570, 595-610.	2.9	103
74	Muscarinic receptor activation tunes mouse stratum oriens interneurones to amplify spike reliability. Journal of Physiology, 2006, 571, 555-562.	2.9	71
75	GABAergic Input onto CA3 Hippocampal Interneurons Remains Shunting throughout Development. Journal of Neuroscience, 2006, 26, 11720-11725.	3.6	123
76	Somatodendritic Kv7/KCNQ/M Channels Control Interspike Interval in Hippocampal Interneurons. Journal of Neuroscience, 2006, 26, 12325-12338.	3.6	175
77	TASK-Like Conductances Are Present within Hippocampal CA1 Stratum Oriens Interneuron Subpopulations. Journal of Neuroscience, 2006, 26, 7362-7367.	3.6	37
78	mGluR7 Is a Metaplastic Switch Controlling Bidirectional Plasticity of Feedforward Inhibition. Neuron, 2005, 46, 89-102.	8.1	166
79	Distinct Roles for the Kainate Receptor Subunits GluR5 and GluR6 in Kainate-Induced Hippocampal Gamma Oscillations. Journal of Neuroscience, 2004, 24, 9658-9668.	3.6	215
80	Two Loci of Expression for Long-Term Depression at Hippocampal Mossy Fiber-Interneuron Synapses. Journal of Neuroscience, 2004, 24, 2112-2121.	3.6	80
81	Quantal transmission at mossy fibre targets in the CA3 region of the rat hippocampus. Journal of Physiology, 2004, 554, 175-193.	2.9	109
82	GABA B receptor modulation of excitatory and inhibitory synaptic transmission onto rat CA3 hippocampal interneurons. Journal of Physiology, 2003, 546, 439-453.	2.9	104
83	Interneuron Diversity series: Containing the detonation â€“ feedforward inhibition in the CA3 hippocampus. Trends in Neurosciences, 2003, 26, 631-640.	8.6	187
84	Depolarization-Induced Long-Term Depression at Hippocampal Mossy Fiber-CA3 Pyramidal Neuron Synapses. Journal of Neuroscience, 2003, 23, 9786-9795.	3.6	51
85	Transient compartmentalization of interneuron dendrites. Journal of Physiology, 2003, 551, 1-1.	2.9	1
86	Distinct NMDA Receptors Provide Differential Modes of Transmission at Mossy Fiber-Interneuron Synapses. Neuron, 2002, 33, 921-933.	8.1	137
87	Activation of Kinetically Distinct Synaptic Conductances on Inhibitory Interneurons by Electrotonically Overlapping Afferents. Neuron, 2002, 35, 161-171.	8.1	35
88	Developmental expression of potassium-channel subunit Kv3.2 within subpopulations of mouse hippocampal inhibitory interneurons. Hippocampus, 2002, 12, 137-148.	1.9	63
89	Kv3 channels: voltage-gated K+ channels designed for high-frequency repetitive firing. Trends in Neurosciences, 2001, 24, 517-526.	8.6	691
90	Interneurons unbound. Nature Reviews Neuroscience, 2001, 2, 11-23.	10.2	585

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91	H2 histamine receptor-phosphorylation of Kv3.2 modulates interneuron fast spiking. Nature Neuroscience, 2000, 3, 791-798.	14.8	105
92	Targetâ€specific expression of preâ€•and postsynaptic mechanisms. Journal of Physiology, 2000, 525, 41-51.	2.9	77
93	Frequencyâ€dependent regulation of rat hippocampal somatoâ€dendritic excitability by the K + channel subunit Kv2.1. Journal of Physiology, 2000, 522, 19-31.	2.9	193
94	Snap-25 is polarized to axons and abundant along the axolemma: an immunogold study of intact neurons. Journal of Neurocytology, 2000, 29, 67-77.	1.5	57
95	Differential Mechanisms of Transmission at Three Types of Mossy Fiber Synapse. Journal of Neuroscience, 2000, 20, 8279-8289.	3.6	238
96	Hippocampal Abnormalities and Enhanced Excitability in a Murine Model of Human Lissencephaly. Journal of Neuroscience, 2000, 20, 2439-2450.	3.6	132
97	Glutamatergic synapses onto hippocampal interneurons: precision timing without lasting plasticity. Trends in Neurosciences, 1999, 22, 228-235.	8.6	100
98	Graded reduction of Pafah1b1 (Lis1) activity results in neuronal migration defects and early embryonic lethality. Nature Genetics, 1998, 19, 333-339.	21.4	554
99	Afferent-specific innervation of two distinct AMPA receptor subtypes on single hippocampal interneurons. Nature Neuroscience, 1998, 1, 572-578.	14.8	227
100	Target-Specific Expression of Presynaptic Mossy Fiber Plasticity. Science, 1998, 279, 1368-1371.	12.6	207
101	Synaptic plasticity in hippocampal interneurons? A commentary. Canadian Journal of Physiology and Pharmacology, 1997, 75, 488-494.	1.4	20
102	Synaptic plasticity in hippocampal interneurons? A commentary. Canadian Journal of Physiology and Pharmacology, 1997, 75, 488-94.	1.4	9
103	Long-Term Potentiation in Distinct Subtypes of Hippocampal Nonpyramidal Neurons. Journal of Neuroscience, 1996, 16, 5334-5343.	3.6	126
104	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, 506-518.	3.6	217
105	Two temporally overlapping "delayed-rectifiers" determine the voltage-dependent potassium current phenotype in cultured hippocampal interneurons. Journal of Neurophysiology, 1996, 76, 1477-1490.	1.8	20
106	The hyperpolarizationâ€activated current (Ih) and its contribution to pacemaker activity in rat CA1 hippocampal stratum oriensâ€alveus interneurones.. Journal of Physiology, 1996, 497, 119-130.	2.9	422
107	Potassium conductances underlying repolarization and afterâ€hyperpolarization in rat CA1 hippocampal interneurones.. Journal of Physiology, 1995, 488, 661-672.	2.9	171
108	Voltageâ€gated potassium currents in stratum oriensâ€alveus inhibitory neurones of the rat CA1 hippocampus.. Journal of Physiology, 1995, 488, 647-660.	2.9	64

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109	Hippocampal inhibitory neuron activity in the elevated potassium model of epilepsy. Journal of Neurophysiology, 1995, 73, 2853-2863.	1.8	36
110	Passive propagation of LTD to stratum oriens-alveus inhibitory neurons modulates the temporoammonic input to the hippocampal CA1 region. Neuron, 1995, 15, 137-145.	8.1	167
111	Activation of metabotropic glutamate receptors differentially affects two classes of hippocampal interneurons and potentiates excitatory synaptic transmission. Journal of Neuroscience, 1994, 14, 4433-4445.	3.6	281
112	Hippocampal inhibitory neuron activity in the elevated potassium model of epilepsy. Journal of Neurophysiology, 1994, 72, 2853-2863.	1.8	51
113	N-methyl-D-aspartic acid receptor structure and function. Physiological Reviews, 1994, 74, 723-760.	28.8	896
114	Heterogeneity of synaptic glutamate receptors on CA3 stratum radiatum interneurones of rat hippocampus.. Journal of Physiology, 1993, 462, 373-392.	2.9	192
115	CNQX increases spontaneous inhibitory input to CA3 pyramidal neurones in neonatal rat hippocampal slices. Brain Research, 1992, 592, 255-260.	2.2	42
116	Regional variation of extracellular space in the hippocampus. Science, 1990, 249, 674-677.	12.6	258
117	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.	2.3	125