Thomas J Mchugh

List of Publications by Year
in descending order

72 papers	7,337 citations	117625 34 h-index	102487 66 g-index
84 all docs	84 docs citations	84 times ranked	9311 citing authors

#	Article	IF	Citations
1	Near-infrared deep brain stimulation via upconversion nanoparticleâ€“mediated optogenetics. Science, 2018, 359, 679-684.	12.6	856
2	Dentate Gyrus NMDA Receptors Mediate Rapid Pattern Separation in the Hippocampal Network. Science, 2007, 317, 94-99.	12.6	841
3	Young Dentate Granule Cells Mediate Pattern Separation, whereas Old Granule Cells Facilitate Pattern Completion. Cell, 2012, 149, 188-201.	28.9	710
4	Impaired Hippocampal Representation of Space in CA1-Specific NMDAR1 Knockout Mice. Cell, 1996, 87, 1339-1349.	28.9	561
5	NMDA receptors, place cells and hippocampal spatial memory. Nature Reviews Neuroscience, 2004, 5, 361-372.	10.2	519
6	Transgenic Inhibition of Synaptic Transmission Reveals Role of CA3 Output in Hippocampal Learning. Science, 2008, 319, 1260-1264.	12.6	414
7	Single-cell bioluminescence imaging of deep tissue in freely moving animals. Science, 2018, 359, 935-939.	12.6	319
8	Gamma Entrainment Binds Higher-Order Brain Regions and Offers Neuroprotection. Neuron, 2019, 102, 929-943.e8.	8.1	252
9	Hippocampal CA3 Output Is Crucial for Ripple-Associated Reactivation and Consolidation of Memory. Neuron, 2009, 62, 781-787.	8.1	239
10	The hippocampal engram maps experience but not place. Science, 2018, 361, 392-397.	12.6	158
11	A dopaminergic switch for fear to safety transitions. Nature Communications, 2018, 9, 2483.	12.8	128
12	A hypothalamic novelty signal modulates hippocampal memory. Nature, 2020, 586, 270-274.	27.8	121
13	Top-down cortical input during NREM sleep consolidates perceptual memory. Science, 2016, 352, 1315-1318.	12.6	120
14	Updating hippocampal representations: CA2 joins the circuit. Trends in Neurosciences, 2011, 34, 526-535.	8.6	112
15	Distinct temporal integration of noradrenaline signaling by astrocytic second messengers during vigilance. Nature Communications, 2020, 11, 471.	12.8	102
16	Distinct preopticâ€•<scp>BST</scp> nuclei dissociate paternal andÂinfanticidal behavior in mice. EMBO Journal, 2015, 34, 2652-2670.	7.8	101
17	Silencing CA3 disrupts temporal coding in the CA1 ensemble. Nature Neuroscience, 2016, 19, 945-951.	14.8	101
18	Chronic Loss of CA2 Transmission Leads to Hippocampal Hyperexcitability. Neuron, 2017, 94, 642-655.e9.	8.1	92

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19	Orexin modulates behavioral fear expression through the locus coeruleus. Nature Communications, 2017, 8, 1606.	12.8	89
20	An Integrated Index: Engrams, Place Cells, and Hippocampal Memory. Neuron, 2020, 107, 805-820.	8.1	86
21	A role for CA3 in social recognition memory. Behavioural Brain Research, 2018, 354, 22-30.	2.2	78
22	The Hippocampal CA2 Ensemble Is Sensitive to Contextual Change. Journal of Neuroscience, 2014, 34, 3056-3066.	3.6	77
23	Sparse Activity of Hippocampal Adult-Born Neurons during REM Sleep Is Necessary for Memory Consolidation. Neuron, 2020, 107, 552-565.e10.	8.1	73
24	The Synchronous Activity of Lateral Habenular Neurons Is Essential for Regulating Hippocampal Theta Oscillation. Journal of Neuroscience, 2013, 33, 8909-8921.	3.6	69
25	Retrograde Synaptic Signaling Mediated by K+ Efflux through Postsynaptic NMDA Receptors. Cell Reports, 2013, 5, 941-951.	6.4	68
26	Stepwise synaptic plasticity events drive the early phase of memory consolidation. Science, 2021, 374, 857-863.	12.6	67
27	Altered hippocampal replay is associated with memory impairment in mice heterozygous for the Scn2a gene. Nature Neuroscience, 2018, 21, 996-1003.	14.8	60
28	CA3 NMDA receptors are required for the rapid formation of a salient contextual representation. Hippocampus, 2009, 19, 1153-1158.	1.9	54
29	Backpropagating Action Potentials Enable Detection of Extrasynaptic Glutamate by NMDA Receptors. Cell Reports, 2012, 1, 495-505.	6.4	54
30	Presynaptic m1 muscarinic receptors are necessary for mGluR long-term depression in the hippocampus. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1618-1623.	7.1	52
31	Visualization of Intraâ€neuronal Motor Protein Transport through Upconversion Microscopy. Angewandte Chemie - International Edition, 2019, 58, 9262-9268.	13.8	52
32	Phasic reward responses in the monkey striatum as detected by voltammetry with diamond microelectrodes. Neuroscience Research, 2011, 71, 49-62.	1.9	48
33	NMDA signaling in CA1 mediates selectively the spatial component of episodic memory. Learning and Memory, 2012, 19, 164-169.	1.3	41
34	Visualization of Intraâ€neuronal Motor Protein Transport through Upconversion Microscopy. Angewandte Chemie, 2019, 131, 9363-9369.	2.0	34
35	Routing Hippocampal Information Flow through Parvalbumin Interneuron Plasticity in Area CA2. Cell Reports, 2019, 27, 86-98.e3.	6.4	34
36	CA2: A Highly Connected Intrahippocampal Relay. Annual Review of Neuroscience, 2020, 43, 55-72.	10.7	33

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37	Spatial exploration is required for the formation of contextual fear memory.. Behavioral Neuroscience, 2007, 121, 335-339.	1.2	32
38	The dynamic impact of repeated stress on the hippocampal spatial map. Hippocampus, 2015, 25, 38-50.	1.9	32
39	Calcitonin receptor signaling in the medial preoptic area enables risk-taking maternal care. Cell Reports, 2021, 35, 109204.	6.4	32
40	Differential Contribution of Hippocampal Subfields to Components of Associative Taste Learning. Journal of Neuroscience, 2014, 34, 11007-11015.	3.6	30
41	The Hippocampal Engram as a Memory Index. Journal of Experimental Neuroscience, 2018, 12, 117906951881594.	2.3	30
42	Physiological Signature of Memory Age in the Prefrontal-Hippocampal Circuit. Cell Reports, 2019, 29, 3835-3846.e5.	6.4	30
43	Two Functionally Distinct Serotonergic Projections into Hippocampus. Journal of Neuroscience, 2020, 40, 4936-4944.	3.6	29
44	CA3 Synaptic Silencing Attenuates Kainic Acid-Induced Seizures and Hippocampal Network Oscillations. ENeuro, 2016, 3, ENEURO.0003-16.2016.	1.9	27
45	Local circuit allowing hypothalamic control of hippocampal area CA2 activity and consequences for CA1. ELife, 2021, 10, .	6.0	22
46	Schizophrenia-like phenotypes in mice with NMDA receptor ablation in intralaminar thalamic nucleus cells and gene therapy-based reversal in adults. Translational Psychiatry, 2017, 7, e1047-e1047.	4.8	21
47	Alterations of in vivo CA1 network activity in Dp(16)1Yey Down syndrome model mice. ELife, 2018, 7, .	6.0	21
48	Genetically Encoded Fluorescent Indicator GRAPHIC Delineates Intercellular Connections. IScience, 2019, 15, 28-38.	4.1	21
49	Amylin-Calcitonin receptor signaling in the medial preoptic area mediates affiliative social behaviors in female mice. Nature Communications, 2022, 13, 709.	12.8	19
50	Brain-specific heterozygous loss-of-function of ATP2A2, endoplasmic reticulum Ca2+ pump responsible for Darierâ€™s disease, causes behavioral abnormalities and a hyper-dopaminergic state. Human Molecular Genetics, 2021, 30, 1762-1772.	2.9	18
51	The hippocampus encodes delay and value information during delay-discounting decision making. ELife, 2020, 9, .	6.0	18
52	Stress enhances hippocampal neuronal synchrony and alters ripple-spike interaction. Neurobiology of Stress, 2021, 14, 100327.	4.0	15
53	CA2 inhibition reduces the precision of hippocampal assembly reactivation. Neuron, 2021, 109, 3674-3687.e7.	8.1	14
54	K⁺ efflux through postsynaptic <scp>NMDA</scp> receptors suppresses local astrocytic glutamate uptake. Glia, 2022, 70, 961-974.	4.9	14

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55	The impact of stress on the hippocampal spatial code. Trends in Neurosciences, 2022, 45, 120-132.	8.6	12
56	Differential Impact of Acute and Chronic Stress on CA1 Spatial Coding and Gamma Oscillations. Frontiers in Behavioral Neuroscience, 2021, 15, 710725.	2.0	11
57	Inhibiting the Activity of CA1 Hippocampal Neurons Prevents the Recall of Contextual Fear Memory in Inducible ArchT Transgenic Mice. PLoS ONE, 2015, 10, e0130163.	2.5	11
58	Lateralization of CA1 assemblies in the absence of CA3 input. Nature Communications, 2021, 12, 6114.	12.8	9
59	Diffusible GRAPHIC to visualize morphology of cells after specific cellâ€“cell contact. Scientific Reports, 2020, 10, 14437.	3.3	8
60	The Ins and Outs of Hippocampal Circuits. Neuron, 2008, 57, 175-177.	8.1	7
61	Noradrenergic modulation of evoked dopamine release and pH shift in the mouse dorsal hippocampus and ventral striatum. Brain Research, 2017, 1657, 74-86.	2.2	7
62	Inducible Knockout of the Cyclin-Dependent Kinase 5 Activator p35 Alters Hippocampal Spatial Coding and Neuronal Excitability. Frontiers in Cellular Neuroscience, 2018, 12, 138.	3.7	4
63	Further-reaching optogenetics. Nature Biomedical Engineering, 2020, 4, 1028-1029.	22.5	4
64	Structure of cortical network activity across natural wake and sleep states in mice. PLoS ONE, 2020, 15, e0233561.	2.5	2
65	A video based feedback system for control of an active commutator during behavioral physiology. Molecular Brain, 2015, 8, 61.	2.6	1
66	Technologies advancing neuroscience. Neuroscience Research, 2020, 152, 1-2.	1.9	1
67	Molecular and Circuit Mechanisms for Hippocampal Learning. , 2008, , 13-19.		1
68	Memory: Sequences Take Time. Current Biology, 2019, 29, R158-R160.	3.9	0
69	Memory Circuits in the Hippocampus. , 2012, , 307-342.		0
70	Differential Contributions of Hippocampus and mPFC to Cost-Benefit Valuation. SSRN Electronic Journal, 0, , .	0.4	0
71	Physiological Signature of Memory Age in the Prefrontal-Hippocampal Circuit. SSRN Electronic Journal, 0, , .	0.4	0
72	Near-infrared deep brain stimulation via upconversion nanoparticle-mediated optogenetics. , 2019, , .		0