

Edi Barkai

List of Publications by Year in descending order

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53
papers

1,934
citations

236925

25
h-index

254184

43
g-index

57
all docs

57
docs citations

57
times ranked

1485
citing authors

#	ARTICLE	IF	CITATIONS
1	Reduced after-hyperpolarization in rat piriform cortex pyramidal neurons is associated with increased learning capability during operant conditioning. <i>European Journal of Neuroscience</i> , 1998, 10, 1518-1523.	2.6	185
2	A Molecular Mechanism for Stabilization of Learning-Induced Synaptic Modifications. <i>Neuron</i> , 2004, 41, 185-192.	8.1	145
3	A Cellular Correlate of Learning-induced Metaplasticity in the Hippocampus. <i>Cerebral Cortex</i> , 2006, 16, 460-468.	2.9	112
4	Long-Lasting Cholinergic Modulation Underlies Rule Learning in Rats. <i>Journal of Neuroscience</i> , 2001, 21, 1385-1392.	3.6	107
5	Long-term modifications in intrinsic neuronal properties and rule learning in rats. <i>European Journal of Neuroscience</i> , 2003, 17, 2727-2734.	2.6	102
6	Olfactory learning is associated with increased spine density along apical dendrites of pyramidal neurons in the rat piriform cortex. <i>European Journal of Neuroscience</i> , 2001, 13, 633-638.	2.6	89
7	Reduced Synaptic Facilitation between Pyramidal Neurons in the Piriform Cortex After Odor Learning. <i>Journal of Neuroscience</i> , 1999, 19, 8616-8622.	3.6	87
8	Learning-Induced Enhancement of Postsynaptic Potentials in Pyramidal Neurons. <i>Journal of Neurophysiology</i> , 2002, 87, 2358-2363.	1.8	65
9	Olfactory Learning-Induced Long-Lasting Enhancement of Descending and Ascending Synaptic Transmission to the Piriform Cortex. <i>Journal of Neuroscience</i> , 2008, 28, 6664-6669.	3.6	64
10	Acetylcholine and associative memory in the piriform cortex. <i>Molecular Neurobiology</i> , 1997, 15, 17-29.	4.0	61
11	Cellular Correlates of Olfactory Learning in the Rat Piriform Cortex. <i>Reviews in the Neurosciences</i> , 2001, 12, 111-20.	2.9	61
12	Olfactory learning-induced increase in spine density along the apical dendrites of CA1 hippocampal neurons. <i>Hippocampus</i> , 2004, 14, 819-825.	1.9	59
13	A Novel Role for Extracellular Signal-Regulated Kinase in Maintaining Long-Term Memory-Relevant Excitability Changes. <i>Journal of Neuroscience</i> , 2007, 27, 12584-12589.	3.6	55
14	Mechanisms underlying rule learning-induced enhancement of excitatory and inhibitory synaptic transmission. <i>Journal of Neurophysiology</i> , 2012, 107, 1222-1229.	1.8	46
15	A non-synaptic mechanism of complex learning: Modulation of intrinsic neuronal excitability. <i>Neurobiology of Learning and Memory</i> , 2018, 154, 30-36.	1.9	44
16	Learning-Induced Bidirectional Plasticity of Intrinsic Neuronal Excitability Reflects the Valence of the Outcome. <i>Cerebral Cortex</i> , 2014, 24, 1075-1087.	2.9	39
17	The Firing of Theta State-Related Septal Cholinergic Neurons Disrupt Hippocampal Ripple Oscillations via Muscarinic Receptors. <i>Journal of Neuroscience</i> , 2020, 40, 3591-3603.	3.6	39
18	Learning-induced enhancement of feedback inhibitory synaptic transmission. <i>Learning and Memory</i> , 2009, 16, 413-416.	1.3	37

#	ARTICLE	IF	CITATIONS
19	SHORT COMMUNICATION Learning-induced reduction in post-burst after-hyperpolarization (AHP) is mediated by activation of PKC. <i>European Journal of Neuroscience</i> , 2002, 16, 965-969.	2.6	35
20	Dynamics of learning-induced spine redistribution along dendrites of pyramidal neurons in rats. <i>European Journal of Neuroscience</i> , 2005, 21, 927-935.	2.6	35
21	Long-Lasting Maintenance of Learning-Induced Enhanced Neuronal Excitability: Mechanisms and Functional Significance. <i>Molecular Neurobiology</i> , 2009, 39, 171-177.	4.0	34
22	NMDA spikes mediate amplification of inputs in the rat piriform cortex. <i>ELife</i> , 2018, 7, .	6.0	34
23	Persistent CaMKII Activation Mediates Learning-Induced Long-Lasting Enhancement of Synaptic Inhibition. <i>Journal of Neuroscience</i> , 2015, 35, 128-139.	3.6	32
24	Learning-Induced Reversal of the Effect of Noradrenalin on the Postburst AHP. <i>Journal of Neurophysiology</i> , 2006, 96, 1728-1733.	1.8	31
25	A Novel Role for Protein Synthesis in Long-Term Neuronal Plasticity: Maintaining Reduced Postburst Afterhyperpolarization. <i>Journal of Neuroscience</i> , 2010, 30, 4338-4342.	3.6	30
26	Differential Modifications of Synaptic Weights During Odor Rule Learning: Dynamics of Interaction Between the Piriform Cortex with Lower and Higher Brain Areas. <i>Cerebral Cortex</i> , 2015, 25, 180-191.	2.9	28
27	Olfactory learning-related NCAM expression is state, time, and location specific and is correlated with individual learning capabilities. <i>Hippocampus</i> , 2005, 15, 316-325.	1.9	26
28	Dynamics of learning-induced cellular modifications in the cortex. <i>Biological Cybernetics</i> , 2005, 92, 360-366.	1.3	23
29	Olfactory learning-induced morphological modifications in single dendritic spines of young rats. <i>European Journal of Neuroscience</i> , 2005, 21, 2217-2226.	2.6	22
30	Calcium/calmodulin-dependent kinase II activity is required for maintaining learning-induced enhancement of L-type calcium channels-mediated synaptic excitation. <i>Journal of Neurochemistry</i> , 2016, 136, 1168-1176.	3.9	19
31	Learning in the absence of experience-dependent regulation of NMDAR composition. <i>Learning and Memory</i> , 2006, 13, 566-570.	1.3	18
32	Learning-induced modulation of SK channels-mediated effect on synaptic transmission. <i>European Journal of Neuroscience</i> , 2007, 26, 3253-3260.	2.6	18
33	Olfactory learning abilities are correlated with the rate by which intrinsic neuronal excitability is modulated in the piriform cortex. <i>European Journal of Neuroscience</i> , 2009, 30, 1339-1348.	2.6	15
34	Learning-induced modulation of the GABA _B -mediated inhibitory synaptic transmission: mechanisms and functional significance. <i>Journal of Neurophysiology</i> , 2014, 111, 2029-2038.	1.8	14
35	Persistent ERK activation maintains learning-induced long-lasting modulation of synaptic connectivity. <i>Learning and Memory</i> , 2008, 15, 756-761.	1.3	12
36	Learning-Induced Long-Term Synaptic Modifications in the Olfactory Cortex. <i>Current Neurovascular Research</i> , 2004, 1, 389-395.	1.1	11

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37	A Cellular Mechanism Underlying Enhanced Capability for Complex Olfactory Discrimination Learning. <i>ENeuro</i> , 2019, 6, ENEURO.0198-18.2019.	1.9	10
38	Plasticity of olfactory bulb inputs mediated by dendritic NMDA-spikes in rodent piriform cortex. <i>ELife</i> , 2021, 10, .	6.0	10
39	Neural Mechanisms of Odor Rule Learning. <i>Progress in Brain Research</i> , 2014, 208, 253-274.	1.4	9
40	CAMKII Activation Is Not Required for Maintenance of Learning-Induced Enhancement of Neuronal Excitability. <i>PLoS ONE</i> , 2009, 4, e4289.	2.5	8
41	Theta Rhythmic Clock-Like Activity of Single Units in the Mouse Hippocampus. <i>Journal of Neuroscience</i> , 2016, 36, 4415-4420.	3.6	7
42	Pentylentetrazole-induced kindling is prevented by prior treatment with cysteamine. <i>European Journal of Pharmacology</i> , 1990, 182, 167-169.	3.5	6
43	Dynamics of olfactory learning-induced up-regulation of L1 in the piriform cortex and hippocampus. <i>European Journal of Neuroscience</i> , 2005, 21, 581-586.	2.6	6
44	Olfactory learning-induced enhancement of the predisposition for LTP induction. <i>Learning and Memory</i> , 2011, 18, 594-597.	1.3	6
45	Real Time Multiplicative Memory Amplification Mediated by Whole-Cell Scaling of Synaptic Response in Key Neurons. <i>PLoS Computational Biology</i> , 2017, 13, e1005306.	3.2	6
46	Learning-induced modulation of the effect of endocannabinoids on inhibitory synaptic transmission. <i>Journal of Neurophysiology</i> , 2018, 119, 752-760.	1.8	6
47	A Cellular Mechanism of Learning-Induced Enhancement of Synaptic Inhibition: PKC-Dependent Upregulation of KCC2 Activation. <i>Scientific Reports</i> , 2020, 10, 962.	3.3	6
48	Physiological expression of olfactory discrimination rule learning balances whole-population modulation and circuit stability in the piriform cortex network. <i>Physiological Reports</i> , 2016, 4, e12830.	1.7	5
49	Tune it in: mechanisms and computational significance of neuron-autonomous plasticity. <i>Journal of Neurophysiology</i> , 2018, 120, 1781-1795.	1.8	5
50	High CO ₂ -bicarbonate buffer modifies GABAergic inhibitory effect at the crayfish neuromuscular synapse. <i>Brain Research</i> , 1991, 567, 149-152.	2.2	3
51	Learning-induced enduring changes in inhibitory synaptic transmission in lateral amygdala are mediated by p21-activated kinase. <i>Journal of Neurophysiology</i> , 2020, 123, 178-190.	1.8	2
52	Preface. <i>Progress in Brain Research</i> , 2014, 208, ix-x.	1.4	1
53	Olfactory learning prevents MK-801-induced psychosis-like behaviour in an animal model of schizophrenia. <i>World Journal of Biological Psychiatry</i> , 2008, 9, 135-146.	2.6	0