Helen E Scharfman

List of Publications by Year
in descending order

116 papers	10,557 citations	28242 55 h-index	36008 97 g-index
127 all docs	127 docs citations	127 times ranked	10653 citing authors

#	Article	IF	Citations
1	The dentate gyrus: fundamental neuroanatomical organization (dentate gyrus for dummies). Progress in Brain Research, 2007, 163, 3-790.	0.9	633
2	Increased neurogenesis and the ectopic granule cells after intrahippocampal BDNF infusion in adult rats. Experimental Neurology, 2005, 192, 348-356.	2.0	598
3	Granule-Like Neurons at the Hilar/CA3 Border after Status Epilepticus and Their Synchrony with Area CA3 Pyramidal Cells: Functional Implications of Seizure-Induced Neurogenesis. Journal of Neuroscience, 2000, 20, 6144-6158.	1.7	556
4	BDNF and epilepsy: too much of a good thing?. Trends in Neurosciences, 2001, 24, 47-53.	4.2	401
5	The neurobiology of epilepsy. Current Neurology and Neuroscience Reports, 2007, 7, 348-354.	2.0	370
6	Aberrant hippocampal neurogenesis contributes to epilepsy and associated cognitive decline. Nature Communications, 2015, 6, 6606.	5.8	333
7	Estrogen and brain-derived neurotrophic factor (BDNF) in hippocampus: Complexity of steroid hormone-growth factor interactions in the adult CNS. Frontiers in Neuroendocrinology, 2006, 27, 415-435.	2.5	256
8	proBDNF Negatively Regulates Neuronal Remodeling, Synaptic Transmission, and Synaptic Plasticity in Hippocampus. Cell Reports, 2014, 7, 796-806.	2.9	238
9	Hippocampal Excitability Increases during the Estrous Cycle in the Rat: A Potential Role for Brain-Derived Neurotrophic Factor. Journal of Neuroscience, 2003, 23, 11641-11652.	1.7	234
10	The enigmatic mossy cell of the dentate gyrus. Nature Reviews Neuroscience, 2016, 17, 562-575.	4.9	211
11	The Influence of Gonadal Hormones on Neuronal Excitability, Seizures, and Epilepsy in the Female. Epilepsia, 2006, 47, 1423-1440.	2.6	209
12	The CA3 â€œbackprojectionâ€•to the dentate gyrus. Progress in Brain Research, 2007, 163, 627-637.	0.9	202
13	Spontaneous Limbic Seizures after Intrahippocampal Infusion of Brain-Derived Neurotrophic Factor. Experimental Neurology, 2002, 174, 201-214.	2.0	179
14	Neuropeptide Y is neuroproliferative for post-natal hippocampal precursor cells. Journal of Neurochemistry, 2003, 86, 646-659.	2.1	166
15	Similarities between actions of estrogen and BDNF in the hippocampus: coincidence or clue?. Trends in Neurosciences, 2005, 28, 79-85.	4.2	163
16	A role for hilar cells in pattern separation in the dentate gyrus: A computational approach. Hippocampus, 2009, 19, 321-337.	0.9	162
17	Hilar mossy cells of the dentate gyrus: a historical perspective. Frontiers in Neural Circuits, 2012, 6, 106.	1.4	158
18	Hyperexcitability in Combined Entorhinal/Hippocampal Slices of Adult Rat After Exposure to Brain-Derived Neurotrophic Factor. Journal of Neurophysiology, 1997, 78, 1082-1095.	0.9	148

#	Article	IF	Citations
19	Electrophysiological Evidence of Monosynaptic Excitatory Transmission Between Granule Cells After Seizure-Induced Mossy Fiber Sprouting. Journal of Neurophysiology, 2003, 90, 2536-2547.	0.9	143
20	Issues related to symptomatic and diseaseâ€modifying treatments affecting cognitive and neuropsychiatric comorbidities of epilepsy. Epilepsia, 2013, 54, 44-60.	2.6	142
21	How Can We Identify Ictal and Interictal Abnormal Activity?. Advances in Experimental Medicine and Biology, 2014, 813, 3-23.	0.8	138
22	Adult-born hippocampal neurons bidirectionally modulate entorhinal inputs into the dentate gyrus. Science, 2019, 364, 578-583.	6.0	138
23	Vascular Endothelial Growth Factor (VEGF) in Seizures:. Advances in Experimental Medicine and Biology, 2004, 548, 57-68.	0.8	135
24	Structural and functional asymmetry in the normal and epileptic rat dentate gyrus. Journal of Comparative Neurology, 2002, 454, 424-439.	0.9	127
25	Activation of local inhibitory circuits in the dentate gyrus by adultâ€born neurons. Hippocampus, 2016, 26, 763-778.	0.9	126
26	Depression of Synaptic Transmission by Vascular Endothelial Growth Factor in Adult Rat Hippocampus and Evidence for Increased Efficacy after Chronic Seizures. Journal of Neuroscience, 2005, 25, 8889-8897.	1.7	117
27	Early Cognitive Experience Prevents Adult Deficits in a Neurodevelopmental Schizophrenia Model. Neuron, 2012, 75, 714-724.	3.8	114
28	Sex differences in the neurobiology of epilepsy: A preclinical perspective. Neurobiology of Disease, 2014, 72, 180-192.	2.1	114
29	Impairment of Select Forms of Spatial Memory and Neurotrophin-Dependent Synaptic Plasticity by Deletion of Glial Aquaporin-4. Journal of Neuroscience, 2011, 31, 6392-6397.	1.7	111
30	Shared cognitive and behavioral impairments in epilepsy and Alzheimer's disease and potential underlying mechanisms. Epilepsy and Behavior, 2013, 26, 343-351.	0.9	111
31	Review: Epilepsy as an Example of Neural Plasticity. Neuroscientist, 2002, 8, 154-173.	2.6	110
32	Actions of Brain-Derived Neurotrophic Factor in Slices from Rats with Spontaneous Seizures and Mossy Fiber Sprouting in the Dentate Gyrus. Journal of Neuroscience, 1999, 19, 5619-5631.	1.7	109
33	NEUROSCIENCE: Is More Neurogenesis Always Better?. Science, 2007, 315, 336-338.	6.0	109
34	Pattern separation in the dentate gyrus: A role for the CA3 backprojection. Hippocampus, 2011, 21, 1190-1215.	0.9	109
35	Interictal spikes during sleep are an early defect in the Tg2576 mouse model of Î²-amyloid neuropathology. Scientific Reports, 2016, 6, 20119.	1.6	109
36	Stereological methods reveal the robust size and stability of ectopic hilar granule cells after pilocarpine-induced status epilepticus in the adult rat. European Journal of Neuroscience, 2006, 24, 2203-2210.	1.2	98

#	Article	IF	Citations
37	Ectopic Granule Cells of the Rat Dentate Gyrus. Developmental Neuroscience, 2007, 29, 14-27.	1.0	96
38	Differential regulation of BDNF, synaptic plasticity and sprouting in the hippocampal mossy fiber pathway of male and female rats. Neuropharmacology, 2014, 76, 696-708.	2.0	96
39	Brain-derived Neurotrophic Factor and Epilepsyâ€”A Missing Link?. Epilepsy Currents, 2005, 5, 83-88.	0.4	94
40	Relevance of Seizure-Induced Neurogenesis in Animal Models of Epilepsy to the Etiology of Temporal Lobe Epilepsy. Epilepsia, 2007, 48, 33-41.	2.6	90
41	Epigenetic suppression of hippocampal calbindin-D28k by Î”FosB drives seizure-related cognitive deficits. Nature Medicine, 2017, 23, 1377-1383.	15.2	86
42	Functional Implications of Seizure-Induced Neurogenesis. Advances in Experimental Medicine and Biology, 2004, 548, 192-212.	0.8	85
43	Mossy fibers are the primary source of afferent input to ectopic granule cells that are born after pilocarpine-induced seizures. Experimental Neurology, 2005, 196, 316-331.	2.0	80
44	Suppression of Adult Neurogenesis Increases the Acute Effects of Kainic Acid. Experimental Neurology, 2015, 264, 135-149.	2.0	79
45	Androgen Modulation of Hippocampal Structure and Function. Neuroscientist, 2016, 22, 46-60.	2.6	78
46	Changes in hippocampal function of ovariectomized rats after sequential low doses of estradiol to simulate the preovulatory estrogen surge. European Journal of Neuroscience, 2007, 26, 2595-2612.	1.2	77
47	Spikeâ€“wave discharges in adult Sprague–Dawley rats and their implications for animal models of temporal lobe epilepsy. Epilepsy and Behavior, 2014, 32, 121-131.	0.9	73
48	Electrophysiological diversity of pyramidal-shaped neurons at the granule cell layer/hilus border of the rat dentate gyrus recorded in vitro. Hippocampus, 1995, 5, 287-305.	0.9	71
49	An Excitatory and Epileptogenic Effect of Dentate Gyrus Mossy Cells in a Mouse Model of Epilepsy. Cell Reports, 2019, 29, 2875-2889.e6.	2.9	71
50	Postnatal neurogenesis as a therapeutic target in temporal lobe epilepsy. Epilepsy Research, 2009, 85, 150-161.	0.8	70
51	Testosterone Depletion in Adult Male Rats Increases Mossy Fiber Transmission, LTP, and Sprouting in Area CA3 of Hippocampus. Journal of Neuroscience, 2013, 33, 2338-2355.	1.7	70
52	Finding a better drug for epilepsy: Preclinical screening strategies and experimental trial design. Epilepsia, 2012, 53, 1860-1867.	2.6	69
53	Seizure susceptibility in intact and ovariectomized female rats treated with the convulsant pilocarpine. Experimental Neurology, 2005, 196, 73-86.	2.0	65
54	Alzheimerâ€™s disease and epilepsy: insight from animal models. Future Neurology, 2012, 7, 177-192.	0.9	64

#	Article	IF	Citations
55	The Influence of Ectopic Migration of Granule Cells into the Hilus on Dentate Gyrus-CA3 Function. PLoS ONE, 2013, 8, e68208.	1.1	63
56	Aquaporin-4 water channels and synaptic plasticity in the hippocampus. Neurochemistry International, 2013, 63, 702-711.	1.9	62
57	New insights into the role of hilar ectopic granule cells in the dentate gyrus based on quantitative anatomic analysis and threeâ€dimensional reconstruction. Epilepsia, 2012, 53, 109-115.	2.6	60
58	Estrogenâ€“Growth Factor Interactions and Their Contributions to Neurological Disorders. Headache, 2008, 48, S77-89.	1.8	59
59	Preclinical common data elements (<scp>CDE</scp>s) for epilepsy: A joint <scp>ILAE</scp>/<scp>AES</scp> and <scp>NINDS</scp> translational initiative. Epilepsia Open, 2018, 3, 9-12.	1.3	57
60	Opioid Receptor-Dependent Sex Differences in Synaptic Plasticity in the Hippocampal Mossy Fiber Pathway of the Adult Rat. Journal of Neuroscience, 2015, 35, 1723-1738.	1.7	54
61	Early Seizure Activity Accelerates Depletion of Hippocampal Neural Stem Cells and Impairs Spatial Discrimination in an Alzheimerâ€™s Disease Model. Cell Reports, 2019, 27, 3741-3751.e4.	2.9	51
62	Seizures and reproductive function: Insights from female rats with epilepsy. Annals of Neurology, 2008, 64, 687-697.	2.8	49
63	Advances in understanding hilar mossy cells of the dentate gyrus. Cell and Tissue Research, 2018, 373, 643-652.	1.5	48
64	Spiny neurons of area CA3c in rat hippocampal slices have similar electrophysiological characteristics and synaptic responses despite morphological variation. Hippocampus, 1993, 3, 9-28.	0.9	43
65	Sex differences in hippocampal area CA3 pyramidal cells. Journal of Neuroscience Research, 2017, 95, 563-575.	1.3	43
66	Bidirectional Regulation of Cognitive and Anxiety-like Behaviors by Dentate Gyrus Mossy Cells in Male and Female Mice. Journal of Neuroscience, 2021, 41, 2475-2495.	1.7	43
67	17Î²-Estradiol Increases Astrocytic Vascular Endothelial Growth Factor (VEGF) in Adult Female Rat Hippocampus. Endocrinology, 2011, 152, 1745-1751.	1.4	42
68	Expression of câ€fos in hilar mossy cells of the dentate gyrus in vivo. Hippocampus, 2013, 23, 649-655.	0.9	41
69	p75^{NTR}, but Not proNGF, Is Upregulated Following Status Epilepticus in Mice. ASN Neuro, 2014, 6, 175909141455218.	1.5	40
70	Novelty and Novel Objects Increase c-Fos Immunoreactivity in Mossy Cells in the Mouse Dentate Gyrus. Neural Plasticity, 2019, 2019, 1-16.	1.0	39
71	Morphometry of hilar ectopic granule cells in the rat. Journal of Comparative Neurology, 2011, 519, 1196-1218.	0.9	38
72	The entorhinal cortex and neurotrophin signaling in Alzheimerâ€™s disease and other disorders. Cognitive Neuroscience, 2013, 4, 123-135.	0.6	38

#	Article	IF	Citations
73	The Dentate Gyrus and Temporal Lobe Epilepsy: An â€œExcitingâ€•Era. Epilepsy Currents, 2019, 19, 249-255.	0.4	37
74	â€œUntanglingâ€•Alzheimer's Disease and Epilepsy. Epilepsy Currents, 2012, 12, 178-183.	0.4	36
75	Is Plasticity of GABAergic Mechanisms Relevant to Epileptogenesis?. Advances in Experimental Medicine and Biology, 2014, 813, 133-150.	0.8	36
76	A Rat Model of Epilepsy in Women: A Tool to Study Physiological Interactions between Endocrine Systems and Seizures. Endocrinology, 2009, 150, 4437-4442.	1.4	34
77	Impact of early life exposure to antiepileptic drugs on neurobehavioral outcomes based on laboratory animal and clinical research. Epilepsy and Behavior, 2013, 26, 427-439.	0.9	34
78	Epileptogenesis in the Parahippocampal Region: Parallels with the Dentate Gyrus. Annals of the New York Academy of Sciences, 2000, 911, 305-327.	1.8	33
79	Modulation of vascular endothelial growth factor (VEGF) expression in motor neurons and its electrophysiological effects. Brain Research Bulletin, 2008, 76, 36-44.	1.4	33
80	Corruption of the dentate gyrus by â€œdominantâ€•granule cells: Implications for dentate gyrus function in health and disease. Neurobiology of Learning and Memory, 2016, 129, 69-82.	1.0	33
81	Dorsal and ventral mossy cells differ in their axonal projections throughout the dentate gyrus of the mouse hippocampus. Hippocampus, 2021, 31, 522-539.	0.9	33
82	A selective role for ARMS/Kidins220 scaffold protein in spatial memory and trophic support of entorhinal and frontal cortical neurons. Experimental Neurology, 2011, 229, 409-420.	2.0	32
83	Potential implications of a monosynaptic pathway from mossy cells to adult-born granule cells of the dentate gyrus. Frontiers in Systems Neuroscience, 2015, 9, 112.	1.2	31
84	Entorhinal cortical defects in Tg2576 mice are present as early as 2â€“4Âmonths of age. Neurobiology of Aging, 2015, 36, 134-148.	1.5	30
85	Interictal spike frequency varies with ovarian cycle stage in a rat model of epilepsy. Experimental Neurology, 2015, 269, 102-119.	2.0	29
86	Temporal Lobe Epilepsy and the BDNF Receptor, TrkB. , 2012, , 514-531.		29
87	Robust chronic convulsive seizures, high frequency oscillations, and human seizure onset patterns in an intrahippocampal kainic acid model in mice. Neurobiology of Disease, 2022, 166, 105637.	2.1	29
88	Expansion of mossy fibers and CA3 apical dendritic length accompanies the fall in dendritic spine density after gonadectomy in male, but not female, rats. Brain Structure and Function, 2017, 222, 587-601.	1.2	26
89	Adult neurogenesis in the mouse dentate gyrus protects the hippocampus from neuronal injury following severe seizures. Hippocampus, 2019, 29, 683-709.	0.9	25
90	Mossy cell axon synaptic contacts on ectopic granule cells that are born following pilocarpine-induced seizures. Neuroscience Letters, 2007, 422, 136-140.	1.0	24

#	Article	IF	Citations
91	Acute restraint stress decreases c-fos immunoreactivity in hilar mossy cells of the adult dentate gyrus. Brain Structure and Function, 2017, 222, 2405-2419.	1.2	22
92	Common data elements (CDEs) for preclinical epilepsy research: Introduction to CDEs and description of core CDEs. A TASK3 report of the ILAE/AES joint translational task force. Epilepsia Open, 2018, 3, 13-23.	1.3	22
93	Common data elements for preclinical epilepsy research: Standards for data collection and reporting. A <scp>TASK</scp>3 report of the <scp>AES</scp>/<scp>ILAE</scp> Translational Task Force of the ILAE. Epilepsia, 2017, 58, 78-86.	2.6	21
94	Plasticity of neuropeptide Y in the dentate gyrus after seizures, and its relevance to seizure-induced neurogenesis. , 2006, , 193-211.		20
95	Epilepsy as a Network Disorder (2): What can we learn from other network disorders such as dementia and schizophrenia, and what are the implications for translational research?. Epilepsy and Behavior, 2018, 78, 302-312.	0.9	17
96	Temporal Lobe Epilepsy. , 2007, , 349-369.		16
97	A Novel Neuroprotective Mechanism for Lithium That Prevents Association of the p75^{NTR}-Sortilin Receptor Complex and Attenuates proNGF-Induced Neuronal DeathIn VitroandIn Vivo. ENeuro, 2018, 5, ENEURO.0257-17.2017.	0.9	16
98	Activation of dentate hilar neurons by stimulation of the fimbria in rat hippocampal slices. Neuroscience Letters, 1993, 156, 61-66.	1.0	15
99	Early changes in synaptic and intrinsic properties of dentate gyrus granule cells in a mouse model of Alzheimer's disease neuropathology and atypical effects of the cholinergic antagonist atropine. Neurobiology of Disease, 2021, 152, 105274.	2.1	15
100	Off-Target Expression of Cre-Dependent Adeno-Associated Viruses in Wild-Type C57BL/6J Mice. ENeuro, 2021, 8, ENEURO.0363-21.2021.	0.9	15
101	Electron microscopy of intracellularly labeled neurons in the hippocampal slice preparation. Microscopy Research and Technique, 1993, 24, 67-84.	1.2	14
102	Hilar granule cells of the mouse dentate gyrus: effects of age, septotemporal location, strain, and selective deletion of the proapoptotic gene BAX. Brain Structure and Function, 2017, 222, 3147-3161.	1.2	14
103	Endocrine Insights into the Pathophysiology of Autism Spectrum Disorder. Neuroscientist, 2021, 27, 650-667.	2.6	13
104	Progressive, potassium-sensitive epileptiform activity in hippocampal area CA3 of pilocarpine-treated rats with recurrent seizures. Epilepsy Research, 2011, 97, 92-102.	0.8	11
105	Brain-Derived Neurotrophic Factor (BDNF) and the Dentate Gyrus Mossy Fibers: Implications for Epilepsy. , 2005, , 201-220.		9
106	Genes Bound by Î”FosB in Different Conditions With Recurrent Seizures Regulate Similar Neuronal Functions. Frontiers in Neuroscience, 2020, 14, 472.	1.4	8
107	The parahippocampal region in temporal lobe epilepsy. , 2002, , 321-340.		8
108	Increased gyrification and aberrant adult neurogenesis of the dentate gyrus in adult rats. Brain Structure and Function, 2017, 222, 4219-4237.	1.2	7

#	Article	IF	Citations
109	Observations on hippocampal mossy cells in mink (Neovison vison) with special reference to dendrites ascending to the granular and molecular layers. Hippocampus, 2016, 26, 229-245.	0.9	6
110	Controlling learning and epilepsy together. Science, 2018, 359, 740-741.	6.0	5
111	Direct synaptic excitation between hilar mossy cells revealed with a targeted voltage sensor. Hippocampus, 2021, 31, 1215-1232.	0.9	5
112	New Insights and Methods for Recording and Imaging Spontaneous Spreading Depolarizations and Seizure-Like Events in Mouse Hippocampal Slices. Frontiers in Cellular Neuroscience, 2021, 15, 761423.	1.8	3
113	Response to Hussain and Perucca. Epilepsia, 2007, 48, 1031-1032.	2.6	1
114	A Novel Excitatory and Epileptogenic Effect of Dentate Gyrus Mossy Cells in a Mouse Model of Epilepsy. SSRN Electronic Journal, 0, , .	0.4	1
115	Preface to the Special Issue entitled â€œThe Future of Translational Epilepsy Researchâ€. Epilepsy and Behavior, 2013, 26, 209.	0.9	0
116	Seizing an opportunity: broader definitions of epilepsy may lead to better treatments. Cerebrum: the Dana Forum on Brain Science, 2010, 2010, 18.	0.1	0