

Helen E Scharfman

List of Publications by Year in descending order

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116
papers

10,557
citations

28274
55
h-index

36028
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.	1.4	633
2	Increased neurogenesis and the ectopic granule cells after intrahippocampal BDNF infusion in adult rats. Experimental Neurology, 2005, 192, 348-356.	4.1	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.	3.6	556
4	BDNF and epilepsy: too much of a good thing?. Trends in Neurosciences, 2001, 24, 47-53.	8.6	401
5	The neurobiology of epilepsy. Current Neurology and Neuroscience Reports, 2007, 7, 348-354.	4.2	370
6	Aberrant hippocampal neurogenesis contributes to epilepsy and associated cognitive decline. Nature Communications, 2015, 6, 6606.	12.8	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.	5.2	256
8	proBDNF Negatively Regulates Neuronal Remodeling, Synaptic Transmission, and Synaptic Plasticity in Hippocampus. Cell Reports, 2014, 7, 796-806.	6.4	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.	3.6	234
10	The enigmatic mossy cell of the dentate gyrus. Nature Reviews Neuroscience, 2016, 17, 562-575.	10.2	211
11	The Influence of Gonadal Hormones on Neuronal Excitability, Seizures, and Epilepsy in the Female. Epilepsia, 2006, 47, 1423-1440.	5.1	209
12	The CA3 "backprojection" to the dentate gyrus. Progress in Brain Research, 2007, 163, 627-637.	1.4	202
13	Spontaneous Limbic Seizures after Intrahippocampal Infusion of Brain-Derived Neurotrophic Factor. Experimental Neurology, 2002, 174, 201-214.	4.1	179
14	Neuropeptide Y is neuroproliferative for post-natal hippocampal precursor cells. Journal of Neurochemistry, 2003, 86, 646-659.	3.9	166
15	Similarities between actions of estrogen and BDNF in the hippocampus: coincidence or clue?. Trends in Neurosciences, 2005, 28, 79-85.	8.6	163
16	A role for hilar cells in pattern separation in the dentate gyrus: A computational approach. Hippocampus, 2009, 19, 321-337.	1.9	162
17	Hilar mossy cells of the dentate gyrus: a historical perspective. Frontiers in Neural Circuits, 2012, 6, 106.	2.8	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.	1.8	148

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19	Electrophysiological Evidence of Monosynaptic Excitatory Transmission Between Granule Cells After Seizure-Induced Mossy Fiber Sprouting. <i>Journal of Neurophysiology</i> , 2003, 90, 2536-2547.	1.8	143
20	Issues related to symptomatic and disease-modifying treatments affecting cognitive and neuropsychiatric comorbidities of epilepsy. <i>Epilepsia</i> , 2013, 54, 44-60.	5.1	142
21	How Can We Identify Ictal and Interictal Abnormal Activity?. <i>Advances in Experimental Medicine and Biology</i> , 2014, 813, 3-23.	1.6	138
22	Adult-born hippocampal neurons bidirectionally modulate entorhinal inputs into the dentate gyrus. <i>Science</i> , 2019, 364, 578-583.	12.6	138
23	Vascular Endothelial Growth Factor (VEGF) in Seizures:. <i>Advances in Experimental Medicine and Biology</i> , 2004, 548, 57-68.	1.6	135
24	Structural and functional asymmetry in the normal and epileptic rat dentate gyrus. <i>Journal of Comparative Neurology</i> , 2002, 454, 424-439.	1.6	127
25	Activation of local inhibitory circuits in the dentate gyrus by adult-born neurons. <i>Hippocampus</i> , 2016, 26, 763-778.	1.9	126
26	Depression of Synaptic Transmission by Vascular Endothelial Growth Factor in Adult Rat Hippocampus and Evidence for Increased Efficacy after Chronic Seizures. <i>Journal of Neuroscience</i> , 2005, 25, 8889-8897.	3.6	117
27	Early Cognitive Experience Prevents Adult Deficits in a Neurodevelopmental Schizophrenia Model. <i>Neuron</i> , 2012, 75, 714-724.	8.1	114
28	Sex differences in the neurobiology of epilepsy: A preclinical perspective. <i>Neurobiology of Disease</i> , 2014, 72, 180-192.	4.4	114
29	Impairment of Select Forms of Spatial Memory and Neurotrophin-Dependent Synaptic Plasticity by Deletion of Glial Aquaporin-4. <i>Journal of Neuroscience</i> , 2011, 31, 6392-6397.	3.6	111
30	Shared cognitive and behavioral impairments in epilepsy and Alzheimer's disease and potential underlying mechanisms. <i>Epilepsy and Behavior</i> , 2013, 26, 343-351.	1.7	111
31	Review: Epilepsy as an Example of Neural Plasticity. <i>Neuroscientist</i> , 2002, 8, 154-173.	3.5	110
32	Actions of Brain-Derived Neurotrophic Factor in Slices from Rats with Spontaneous Seizures and Mossy Fiber Sprouting in the Dentate Gyrus. <i>Journal of Neuroscience</i> , 1999, 19, 5619-5631.	3.6	109
33	NEUROSCIENCE: Is More Neurogenesis Always Better?. <i>Science</i> , 2007, 315, 336-338.	12.6	109
34	Pattern separation in the dentate gyrus: A role for the CA3 backprojection. <i>Hippocampus</i> , 2011, 21, 1190-1215.	1.9	109
35	Interictal spikes during sleep are an early defect in the Tg2576 mouse model of β -amyloid neuropathology. <i>Scientific Reports</i> , 2016, 6, 20119.	3.3	109
36	Stereological methods reveal the robust size and stability of ectopic hilar granule cells after pilocarpine-induced status epilepticus in the adult rat. <i>European Journal of Neuroscience</i> , 2006, 24, 2203-2210.	2.6	98

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37	Ectopic Granule Cells of the Rat Dentate Gyrus. <i>Developmental Neuroscience</i> , 2007, 29, 14-27.	2.0	96
38	Differential regulation of BDNF, synaptic plasticity and sprouting in the hippocampal mossy fiber pathway of male and female rats. <i>Neuropharmacology</i> , 2014, 76, 696-708.	4.1	96
39	Brain-derived Neurotrophic Factor and Epilepsy—A Missing Link?. <i>Epilepsy Currents</i> , 2005, 5, 83-88.	0.8	94
40	Relevance of Seizure-Induced Neurogenesis in Animal Models of Epilepsy to the Etiology of Temporal Lobe Epilepsy. <i>Epilepsia</i> , 2007, 48, 33-41.	5.1	90
41	Epigenetic suppression of hippocampal calbindin-D28k by β -FosB drives seizure-related cognitive deficits. <i>Nature Medicine</i> , 2017, 23, 1377-1383.	30.7	86
42	Functional Implications of Seizure-Induced Neurogenesis. <i>Advances in Experimental Medicine and Biology</i> , 2004, 548, 192-212.	1.6	85
43	Mossy fibers are the primary source of afferent input to ectopic granule cells that are born after pilocarpine-induced seizures. <i>Experimental Neurology</i> , 2005, 196, 316-331.	4.1	80
44	Suppression of Adult Neurogenesis Increases the Acute Effects of Kainic Acid. <i>Experimental Neurology</i> , 2015, 264, 135-149.	4.1	79
45	Androgen Modulation of Hippocampal Structure and Function. <i>Neuroscientist</i> , 2016, 22, 46-60.	3.5	78
46	Changes in hippocampal function of ovariectomized rats after sequential low doses of estradiol to simulate the preovulatory estrogen surge. <i>European Journal of Neuroscience</i> , 2007, 26, 2595-2612.	2.6	77
47	Spike-wave discharges in adult Sprague-Dawley rats and their implications for animal models of temporal lobe epilepsy. <i>Epilepsy and Behavior</i> , 2014, 32, 121-131.	1.7	73
48	Electrophysiological diversity of pyramidal-shaped neurons at the granule cell layer/hilus border of the rat dentate gyrus recorded in vitro. <i>Hippocampus</i> , 1995, 5, 287-305.	1.9	71
49	An Excitatory and Epileptogenic Effect of Dentate Gyrus Mossy Cells in a Mouse Model of Epilepsy. <i>Cell Reports</i> , 2019, 29, 2875-2889.e6.	6.4	71
50	Postnatal neurogenesis as a therapeutic target in temporal lobe epilepsy. <i>Epilepsy Research</i> , 2009, 85, 150-161.	1.6	70
51	Testosterone Depletion in Adult Male Rats Increases Mossy Fiber Transmission, LTP, and Sprouting in Area CA3 of Hippocampus. <i>Journal of Neuroscience</i> , 2013, 33, 2338-2355.	3.6	70
52	Finding a better drug for epilepsy: Preclinical screening strategies and experimental trial design. <i>Epilepsia</i> , 2012, 53, 1860-1867.	5.1	69
53	Seizure susceptibility in intact and ovariectomized female rats treated with the convulsant pilocarpine. <i>Experimental Neurology</i> , 2005, 196, 73-86.	4.1	65
54	Alzheimer's disease and epilepsy: insight from animal models. <i>Future Neurology</i> , 2012, 7, 177-192.	0.5	64

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55	The Influence of Ectopic Migration of Granule Cells into the Hilus on Dentate Gyrus-CA3 Function. PLoS ONE, 2013, 8, e68208.	2.5	63
56	Aquaporin-4 water channels and synaptic plasticity in the hippocampus. Neurochemistry International, 2013, 63, 702-711.	3.8	62
57	New insights into the role of hilar ectopic granule cells in the dentate gyrus based on quantitative anatomic analysis and three-dimensional reconstruction. Epilepsia, 2012, 53, 109-115.	5.1	60
58	Estrogen-Growth Factor Interactions and Their Contributions to Neurological Disorders. Headache, 2008, 48, S77-89.	3.9	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.	2.4	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.	3.6	54
61	Early Seizure Activity Accelerates Depletion of Hippocampal Neural Stem Cells and Impairs Spatial Discrimination in an Alzheimer's Disease Model. Cell Reports, 2019, 27, 3741-3751.e4.	6.4	51
62	Seizures and reproductive function: Insights from female rats with epilepsy. Annals of Neurology, 2008, 64, 687-697.	5.3	49
63	Advances in understanding hilar mossy cells of the dentate gyrus. Cell and Tissue Research, 2018, 373, 643-652.	2.9	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.	1.9	43
65	Sex differences in hippocampal area CA3 pyramidal cells. Journal of Neuroscience Research, 2017, 95, 563-575.	2.9	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.	3.6	43
67	17 β -Estradiol Increases Astrocytic Vascular Endothelial Growth Factor (VEGF) in Adult Female Rat Hippocampus. Endocrinology, 2011, 152, 1745-1751.	2.8	42
68	Expression of c-Fos in hilar mossy cells of the dentate gyrus <i>in vivo</i>. Hippocampus, 2013, 23, 649-655.	1.9	41
69	p75 ^{NTR} , but Not proNGF, Is Upregulated Following Status Epilepticus in Mice. ASN Neuro, 2014, 6, 175909141455218.	2.7	40
70	Novelty and Novel Objects Increase c-Fos Immunoreactivity in Mossy Cells in the Mouse Dentate Gyrus. Neural Plasticity, 2019, 2019, 1-16.	2.2	39
71	Morphometry of hilar ectopic granule cells in the rat. Journal of Comparative Neurology, 2011, 519, 1196-1218.	1.6	38
72	The entorhinal cortex and neurotrophin signaling in Alzheimer's disease and other disorders. Cognitive Neuroscience, 2013, 4, 123-135.	1.4	38

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73	The Dentate Gyrus and Temporal Lobe Epilepsy: An “Exciting” Era. <i>Epilepsy Currents</i> , 2019, 19, 249-255.	0.8	37
74	“Untangling” Alzheimer's Disease and Epilepsy. <i>Epilepsy Currents</i> , 2012, 12, 178-183.	0.8	36
75	Is Plasticity of GABAergic Mechanisms Relevant to Epileptogenesis?. <i>Advances in Experimental Medicine and Biology</i> , 2014, 813, 133-150.	1.6	36
76	A Rat Model of Epilepsy in Women: A Tool to Study Physiological Interactions between Endocrine Systems and Seizures. <i>Endocrinology</i> , 2009, 150, 4437-4442.	2.8	34
77	Impact of early life exposure to antiepileptic drugs on neurobehavioral outcomes based on laboratory animal and clinical research. <i>Epilepsy and Behavior</i> , 2013, 26, 427-439.	1.7	34
78	Epileptogenesis in the Parahippocampal Region: Parallels with the Dentate Gyrus. <i>Annals of the New York Academy of Sciences</i> , 2000, 911, 305-327.	3.8	33
79	Modulation of vascular endothelial growth factor (VEGF) expression in motor neurons and its electrophysiological effects. <i>Brain Research Bulletin</i> , 2008, 76, 36-44.	3.0	33
80	Corruption of the dentate gyrus by “dominant” granule cells: Implications for dentate gyrus function in health and disease. <i>Neurobiology of Learning and Memory</i> , 2016, 129, 69-82.	1.9	33
81	Dorsal and ventral mossy cells differ in their axonal projections throughout the dentate gyrus of the mouse hippocampus. <i>Hippocampus</i> , 2021, 31, 522-539.	1.9	33
82	A selective role for ARMS/Kidins220 scaffold protein in spatial memory and trophic support of entorhinal and frontal cortical neurons. <i>Experimental Neurology</i> , 2011, 229, 409-420.	4.1	32
83	Potential implications of a monosynaptic pathway from mossy cells to adult-born granule cells of the dentate gyrus. <i>Frontiers in Systems Neuroscience</i> , 2015, 9, 112.	2.5	31
84	Entorhinal cortical defects in Tg2576 mice are present as early as 4 months of age. <i>Neurobiology of Aging</i> , 2015, 36, 134-148.	3.1	30
85	Interictal spike frequency varies with ovarian cycle stage in a rat model of epilepsy. <i>Experimental Neurology</i> , 2015, 269, 102-119.	4.1	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. <i>Neurobiology of Disease</i> , 2022, 166, 105637.	4.4	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. <i>Brain Structure and Function</i> , 2017, 222, 587-601.	2.3	26
89	Adult neurogenesis in the mouse dentate gyrus protects the hippocampus from neuronal injury following severe seizures. <i>Hippocampus</i> , 2019, 29, 683-709.	1.9	25
90	Mossy cell axon synaptic contacts on ectopic granule cells that are born following pilocarpine-induced seizures. <i>Neuroscience Letters</i> , 2007, 422, 136-140.	2.1	24

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91	Acute restraint stress decreases c-fos immunoreactivity in hilar mossy cells of the adult dentate gyrus. <i>Brain Structure and Function</i> , 2017, 222, 2405-2419.	2.3	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. <i>Epilepsia Open</i> , 2018, 3, 13-23.	2.4	22
93	Common data elements for preclinical epilepsy research: Standards for data collection and reporting. A TASK3 report of the AES/ILAE Translational Task Force of the ILAE. <i>Epilepsia</i> , 2017, 58, 78-86.	5.1	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?. <i>Epilepsy and Behavior</i> , 2018, 78, 302-312.	1.7	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 Death <i>in Vitro</i> and <i>In Vivo</i> . <i>ENeuro</i> , 2018, 5, ENEURO.0257-17.2017.	1.9	16
98	Activation of dentate hilar neurons by stimulation of the fimbria in rat hippocampal slices. <i>Neuroscience Letters</i> , 1993, 156, 61-66.	2.1	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. <i>Neurobiology of Disease</i> , 2021, 152, 105274.	4.4	15
100	Off-Target Expression of Cre-Dependent Adeno-Associated Viruses in Wild-Type C57BL/6J Mice. <i>ENeuro</i> , 2021, 8, ENEURO.0363-21.2021.	1.9	15
101	Electron microscopy of intracellularly labeled neurons in the hippocampal slice preparation. <i>Microscopy Research and Technique</i> , 1993, 24, 67-84.	2.2	14
102	Hilar granule cells of the mouse dentate gyrus: effects of age, septotemporal location, strain, and selective deletion of the proapoptotic gene BAX. <i>Brain Structure and Function</i> , 2017, 222, 3147-3161.	2.3	14
103	Endocrine Insights into the Pathophysiology of Autism Spectrum Disorder. <i>Neuroscientist</i> , 2021, 27, 650-667.	3.5	13
104	Progressive, potassium-sensitive epileptiform activity in hippocampal area CA3 of pilocarpine-treated rats with recurrent seizures. <i>Epilepsy Research</i> , 2011, 97, 92-102.	1.6	11
105	Brain-Derived Neurotrophic Factor (BDNF) and the Dentate Gyrus Mossy Fibers: Implications for Epilepsy. , 2005, , 201-220.		9
106	Genes Bound by FosB in Different Conditions With Recurrent Seizures Regulate Similar Neuronal Functions. <i>Frontiers in Neuroscience</i> , 2020, 14, 472.	2.8	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. <i>Brain Structure and Function</i> , 2017, 222, 4219-4237.	2.3	7

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109	Observations on hippocampal mossy cells in mink (<i>Neovison vison</i>) with special reference to dendrites ascending to the granular and molecular layers. <i>Hippocampus</i> , 2016, 26, 229-245.	1.9	6
110	Controlling learning and epilepsy together. <i>Science</i> , 2018, 359, 740-741.	12.6	5
111	Direct synaptic excitation between hilar mossy cells revealed with a targeted voltage sensor. <i>Hippocampus</i> , 2021, 31, 1215-1232.	1.9	5
112	New Insights and Methods for Recording and Imaging Spontaneous Spreading Depolarizations and Seizure-Like Events in Mouse Hippocampal Slices. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 761423.	3.7	3
113	Response to Hussain and Perucca. <i>Epilepsia</i> , 2007, 48, 1031-1032.	5.1	1
114	A Novel Excitatory and Epileptogenic Effect of Dentate Gyrus Mossy Cells in a Mouse Model of Epilepsy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
115	Preface to the Special Issue entitled "The Future of Translational Epilepsy Research" <i>Epilepsy and Behavior</i> , 2013, 26, 209.	1.7	0
116	Seizing an opportunity: broader definitions of epilepsy may lead to better treatments. <i>Cerebrum: the Dana Forum on Brain Science</i> , 2010, 2010, 18.	0.1	0