Heinz Beck

List of Publications by Year
in descending order

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58	5,154	109321	155660
papers	citations	35 h-index	55 g-index

65	65	65	5353
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Localized chemogenetic silencing of inhibitory neurons: a novel mouse model of focal cortical epileptic activity. Cerebral Cortex, 2023, 33, 2838-2856.	2.9	4
2	Complex effects of eslicarbazepine on inhibitory micro networks in chronic experimental epilepsy. Epilepsia, 2021, 62, 542-556.	5.1	4
3	Synchronous activity patterns in the dentate gyrus during immobility. ELife, 2021, 10, .	6.0	25
4	Ste20-like Kinase Is Critical for Inhibitory Synapse Maintenance and Its Deficiency Confers a Developmental Dendritopathy. Journal of Neuroscience, 2021, 41, 8111-8125.	3.6	4
5	A novel theoretical framework for simultaneous measurement of excitatory and inhibitory conductances. PLoS Computational Biology, 2021, 17, e1009725.	3.2	0
6	Quantitative properties of a feedback circuit predict frequency-dependent pattern separation. ELife, 2020, 9, .	6.0	22
7	Altered Dynamics of Canonical Feedback Inhibition Predicts Increased Burst Transmission in Chronic Epilepsy. Journal of Neuroscience, 2019, 39, 8998-9012.	3.6	8
8	Polyamine Modulation of Anticonvulsant Drug Response: A Potential Mechanism Contributing to Pharmacoresistance in Chronic Epilepsy. Journal of Neuroscience, 2018, 38, 5596-5605.	3.6	11
9	Effects of eslicarbazepine on slow inactivation processes of sodium channels in dentate gyrus granule cells. Epilepsia, 2018, 59, 1492-1506.	5.1	13
10	Activity of the anticonvulsant lacosamide in experimental and human epilepsy via selective effects on slow Na⁺ channel inactivation. Epilepsia, 2017, 58, 27-41.	5.1	38
11	Functional properties of granule cells with hilar basal dendrites in the epileptic dentate gyrus. Epilepsia, 2017, 58, 160-171.	5.1	23
12	Astrocyte Intermediaries of Septal Cholinergic Modulation in the Hippocampus. Neuron, 2016, 90, 853-865.	8.1	100
13	Advances in the development of biomarkers for epilepsy. Lancet Neurology, The, 2016, 15, 843-856.	10.2	283
14	Synergy of Direct and Indirect Cholinergic Septo-Hippocampal Pathways Coordinates Firing in Hippocampal Networks. Journal of Neuroscience, 2015, 35, 8394-8410.	3.6	118
15	Zinc regulates a key transcriptional pathway for epileptogenesis via metal-regulatory transcription factor 1. Nature Communications, 2015, 6, 8688.	12.8	42
16	Downregulation of Spermine Augments Dendritic Persistent Sodium Currents and Synaptic Integration after Status Epilepticus. Journal of Neuroscience, 2015, 35, 15240-15253.	3.6	21
17	Targeting pharmacoresistant epilepsy and epileptogenesis with a dual-purpose antiepileptic drug. Brain, 2015, 138, 371-387.	7.6	72
18	SFB 1089: Synaptic Micronetworks in Health and Disease. E-Neuroforum, 2014, 20, 194-197.	0.1	0

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19	The effects of eslicarbazepine on persistent Na+ current and the role of the Na+ channel Î² subunits. Epilepsy Research, 2014, 108, 202-211.	1.6	30
20	Impaired Action Potential Initiation in GABAergic Interneurons Causes Hyperexcitable Networks in an Epileptic Mouse Model Carrying a Human Na_V1.1 Mutation. Journal of Neuroscience, 2014, 34, 14874-14889.	3.6	138
21	Function of Inhibitory Micronetworks Is Spared by Na+ Channel-Acting Anticonvulsant Drugs. Journal of Neuroscience, 2014, 34, 9720-9735.	3.6	25
22	Axon-Carrying Dendrites Convey Privileged Synaptic Input in Hippocampal Neurons. Neuron, 2014, 83, 1418-1430.	8.1	93
23	RIM3Â and RIM4Â Are Key Regulators of Neuronal Arborization. Journal of Neuroscience, 2013, 33, 824-839.	3.6	17
24	The Presynaptic Active Zone Protein RIM1Î± Controls Epileptogenesis following Status Epilepticus. Journal of Neuroscience, 2012, 32, 12384-12395.	3.6	20
25	Transcriptional Regulation of T-type Calcium Channel CaV3.2. Journal of Biological Chemistry, 2012, 287, 15489-15501.	3.4	67
26	Inhibitory Control of Linear and Supralinear Dendritic Excitation in CA1 Pyramidal Neurons. Neuron, 2012, 75, 851-864.	8.1	82
27	Loss of Î²₁ accessory Na⁺ channel subunits causes failure of carbamazepine, but not of lacosamide, in blocking highâ€frequency firing via differential effects on persistent Na⁺ currents. Epilepsia, 2012, 53, 1959-1967.	5.1	27
28	An Increase in Persistent Sodium Current Contributes to Intrinsic Neuronal Bursting After Status Epilepticus. Journal of Neurophysiology, 2011, 105, 117-129.	1.8	104
29	Plasticity of antiepileptic drug targets. Epilepsia, 2010, 51, 90-90.	5.1	4
30	Efficacy Loss of the Anticonvulsant Carbamazepine in Mice Lacking Sodium Channel Â Subunits via Paradoxical Effects on Persistent Sodium Currents. Journal of Neuroscience, 2010, 30, 8489-8501.	3.6	66
31	Activity-Dependent Control of Neuronal Output by Local and Global Dendritic Spike Attenuation. Neuron, 2009, 61, 906-916.	8.1	88
32	Plasticity of intrinsic neuronal properties in CNS disorders. Nature Reviews Neuroscience, 2008, 9, 357-369.	10.2	224
33	Transcriptional Upregulation of Ca_v3.2 Mediates Epileptogenesis in the Pilocarpine Model of Epilepsy. Journal of Neuroscience, 2008, 28, 13341-13353.	3.6	179
34	Role of Axonal Na_V1.6 Sodium Channels in Action Potential Initiation of CA1 Pyramidal Neurons. Journal of Neurophysiology, 2008, 100, 2361-2380.	1.8	181
35	Epilepsy research: a window onto function and dysfunction of the human brain. Dialogues in Clinical Neuroscience, 2008, 10, 7-15.	3.7	13
36	Loss of Metabotropic Glutamate Receptor-Dependent Long-Term Depression via Downregulation of mGluR5 after Status Epilepticus. Journal of Neuroscience, 2007, 27, 7696-7704.	3.6	54

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37	Plasticity of Antiepileptic Drug Targets. Epilepsia, 2007, 48, 14-18.	5.1	47
38	Diminished Response of CA1 Neurons to Antiepileptic Drugs in Chronic Epilepsy. Epilepsia, 2007, 48, 1339-1350.	5.1	29
39	Molecular and cellular mechanisms of pharmacoresistance in epilepsy. Brain, 2006, 129, 18-35.	7.6	350
40	Neurophysiologische Grundlagen. , 2006, , 141-175.		0
41	Proximal Persistent Na+ Channels Drive Spike Afterdepolarizations and Associated Bursting in Adult CA1 Pyramidal Cells. Journal of Neuroscience, 2005, 25, 9704-9720.	3.6	170
42	Acquired Dendritic Channelopathy in Temporal Lobe Epilepsy. Science, 2004, 305, 532-535.	12.6	402
43	A novel mechanism underlying drug resistance in chronic epilepsy. Annals of Neurology, 2003, 53, 469-479.	5.3	247
44	Anticonvulsant pharmacology of voltage-gated Na+channels in hippocampal neurons of control and chronically epileptic rats. European Journal of Neuroscience, 2003, 17, 2648-2658.	2.6	96
45	Enhanced Expression of a Specific Hyperpolarization-Activated Cyclic Nucleotide-Gated Cation Channel (HCN) in Surviving Dentate Gyrus Granule Cells of Human and Experimental Epileptic Hippocampus. Journal of Neuroscience, 2003, 23, 6826-6836.	3.6	179
46	Transcriptional profiling in human epilepsy: expression array and single cell real-time qRT-PCR analysis reveal distinct cellular gene regulation. NeuroReport, 2002, 13, 1327-1333.	1.2	59
47	Upregulation of a T-Type Ca²⁺Channel Causes a Long-Lasting Modification of Neuronal Firing Mode after Status Epilepticus. Journal of Neuroscience, 2002, 22, 3645-3655.	3.6	286
48	Seizure-dependent modulation of mitochondrial oxidative phosphorylation in rat hippocampus. European Journal of Neuroscience, 2002, 15, 1105-1114.	2.6	142
49	Long-lasting modification of intrinsic discharge properties in subicular neurons following status epilepticus. European Journal of Neuroscience, 2002, 16, 259-266.	2.6	67
50	The CaV2.3 Ca2+channel subunit contributes to Râ€Type Ca2+currents in murine hippocampal and neocortical neurones. Journal of Physiology, 2002, 542, 699-710.	2.9	79
51	Activity-Induced Expression of Common Reference Genes in Individual CNS Neurons. Laboratory Investigation, 2001, 81, 913-916.	3.7	74
52	Functional and molecular analysis of transient voltageâ€dependent K + currents in rat hippocampal granule cells. Journal of Physiology, 2001, 537, 391-406.	2.9	54
53	Slow recovery from inactivation regulates the availability of voltageâ€dependent Na + channels in hippocampal granule cells, hilar neurons and basket cells. Journal of Physiology, 2001, 532, 385-397.	2.9	63
54	Mitochondrial complex I deficiency in the epileptic focus of patients with temporal lobe epilepsy. Annals of Neurology, 2000, 48, 766-773.	5.3	201

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55	Surviving Granule Cells of the Sclerotic Human Hippocampus Have Reduced Ca²⁺Influx Because of a Loss of Calbindin-D_{28k}in Temporal Lobe Epilepsy. Journal of Neuroscience, 2000, 20, 1831-1836.	3.6	137
56	Mitochondrial complex I deficiency in the epileptic focus of patients with temporal lobe epilepsy. Annals of Neurology, 2000, 48, 766-773.	5.3	10
57	Molecular neuropathology of human mesial temporal lobe epilepsy. Epilepsy Research, 1999, 36, 205-223.	1.6	154
58	Effects of Phenytoin, Carbamazepine, and Gabapentin on Calcium Channels in Hippocampal Granule Cells from Patients with Temporal Lobe Epilepsy. Epilepsia, 1998, 39, 355-363.	5.1	106