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	Acquired Dendritic Channelopathy in Temporal Lobe Epilepsy. Science, 2004, 305, 532-535.	12.6	402
2	Molecular and cellular mechanisms of pharmacoresistance in epilepsy. Brain, 2006, 129, 18-35.	7.6	350
3	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
4	Advances in the development of biomarkers for epilepsy. Lancet Neurology, The, 2016, 15, 843-856.	10.2	283
5	A novel mechanism underlying drug resistance in chronic epilepsy. Annals of Neurology, 2003, 53, 469-479.	5.3	247
6	Plasticity of intrinsic neuronal properties in CNS disorders. Nature Reviews Neuroscience, 2008, 9, 357-369.	10.2	224
7	Mitochondrial complex I deficiency in the epileptic focus of patients with temporal lobe epilepsy. Annals of Neurology, 2000, 48, 766-773.	5.3	201
8	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
9	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
10	Transcriptional Upregulation of Ca_v3.2 Mediates Epileptogenesis in the Pilocarpine Model of Epilepsy. Journal of Neuroscience, 2008, 28, 13341-13353.	3.6	179
11	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
12	Molecular neuropathology of human mesial temporal lobe epilepsy. Epilepsy Research, 1999, 36, 205-223.	1.6	154
13	Seizure-dependent modulation of mitochondrial oxidative phosphorylation in rat hippocampus. European Journal of Neuroscience, 2002, 15, 1105-1114.	2.6	142
14	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
15	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
16	Synergy of Direct and Indirect Cholinergic Septo-Hippocampal Pathways Coordinates Firing in Hippocampal Networks. Journal of Neuroscience, 2015, 35, 8394-8410.	3.6	118
17	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
18	An Increase in Persistent Sodium Current Contributes to Intrinsic Neuronal Bursting After Status Epilepticus. Journal of Neurophysiology, 2011, 105, 117-129.	1.8	104

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19	Astrocyte Intermediaries of Septal Cholinergic Modulation in the Hippocampus. Neuron, 2016, 90, 853-865.	8.1	100
20	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
21	Axon-Carrying Dendrites Convey Privileged Synaptic Input in Hippocampal Neurons. Neuron, 2014, 83, 1418-1430.	8.1	93
22	Activity-Dependent Control of Neuronal Output by Local and Global Dendritic Spike Attenuation. Neuron, 2009, 61, 906-916.	8.1	88
23	Inhibitory Control of Linear and Supralinear Dendritic Excitation in CA1 Pyramidal Neurons. Neuron, 2012, 75, 851-864.	8.1	82
24	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
25	Activity-Induced Expression of Common Reference Genes in Individual CNS Neurons. Laboratory Investigation, 2001, 81, 913-916.	3.7	74
26	Targeting pharmacoresistant epilepsy and epileptogenesis with a dual-purpose antiepileptic drug. Brain, 2015, 138, 371-387.	7.6	72
27	Long-lasting modification of intrinsic discharge properties in subicular neurons following status epilepticus. European Journal of Neuroscience, 2002, 16, 259-266.	2.6	67
28	Transcriptional Regulation of T-type Calcium Channel CaV3.2. Journal of Biological Chemistry, 2012, 287, 15489-15501.	3.4	67
29	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
30	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
31	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
32	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
33	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
34	Plasticity of Antiepileptic Drug Targets. Epilepsia, 2007, 48, 14-18.	5.1	47
35	Zinc regulates a key transcriptional pathway for epileptogenesis via metal-regulatory transcription factor 1. Nature Communications, 2015, 6, 8688.	12.8	42
36	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

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37	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
38	Diminished Response of CA1 Neurons to Antiepileptic Drugs in Chronic Epilepsy. Epilepsia, 2007, 48, 1339-1350.	5.1	29
39	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
40	Function of Inhibitory Micronetworks Is Spared by Na+ Channel-Acting Anticonvulsant Drugs. Journal of Neuroscience, 2014, 34, 9720-9735.	3.6	25
41	Synchronous activity patterns in the dentate gyrus during immobility. ELife, 2021, 10, .	6.0	25
42	Functional properties of granule cells with hilar basal dendrites in the epileptic dentate gyrus. Epilepsia, 2017, 58, 160-171.	5.1	23
43	Quantitative properties of a feedback circuit predict frequency-dependent pattern separation. ELife, 2020, 9, .	6.0	22
44	Downregulation of Spermine Augments Dendritic Persistent Sodium Currents and Synaptic Integration after Status Epilepticus. Journal of Neuroscience, 2015, 35, 15240-15253.	3.6	21
45	The Presynaptic Active Zone Protein RIM1Î± Controls Epileptogenesis following Status Epilepticus. Journal of Neuroscience, 2012, 32, 12384-12395.	3.6	20
46	RIM3Â and RIM4Â Are Key Regulators of Neuronal Arborization. Journal of Neuroscience, 2013, 33, 824-839.	3.6	17
47	Effects of eslicarbazepine on slow inactivation processes of sodium channels in dentate gyrus granule cells. Epilepsia, 2018, 59, 1492-1506.	5.1	13
48	Epilepsy research: a window onto function and dysfunction of the human brain. Dialogues in Clinical Neuroscience, 2008, 10, 7-15.	3.7	13
49	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
50	Mitochondrial complex I deficiency in the epileptic focus of patients with temporal lobe epilepsy. Annals of Neurology, 2000, 48, 766-773.	5.3	10
51	Altered Dynamics of Canonical Feedback Inhibition Predicts Increased Burst Transmission in Chronic Epilepsy. Journal of Neuroscience, 2019, 39, 8998-9012.	3.6	8
52	Plasticity of antiepileptic drug targets. Epilepsia, 2010, 51, 90-90.	5.1	4
53	Complex effects of eslicarbazepine on inhibitory micro networks in chronic experimental epilepsy. Epilepsia, 2021, 62, 542-556.	5.1	4
54	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

#	Article	IF	Citations
55	Localized chemogenetic silencing of inhibitory neurons: a novel mouse model of focal cortical epileptic activity. Cerebral Cortex, 2023, 33, 2838-2856.	2.9	4
56	SFB 1089: Synaptic Micronetworks in Health and Disease. E-Neuroforum, 2014, 20, 194-197.	0.1	0
57	Neurophysiologische Grundlagen. , 2006, , 141-175.		0
58	A novel theoretical framework for simultaneous measurement of excitatory and inhibitory conductances. PLoS Computational Biology, 2021, 17, e1009725.	3.2	0