

Karl Herrup

List of Publications by Year in descending order

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128
papers

15,723
citations

36303

51
h-index

18130

120
g-index

138
all docs

138
docs citations

138
times ranked

18111
citing authors

#	ARTICLE	IF	CITATIONS
1	Neuroinflammation in Alzheimer's disease. <i>Lancet Neurology</i> , The, 2015, 14, 388-405.	10.2	4,129
2	Mice deficient for Rb are nonviable and show defects in neurogenesis and haematopoiesis. <i>Nature</i> , 1992, 359, 288-294.	27.8	1,259
3	The case for rejecting the amyloid cascade hypothesis. <i>Nature Neuroscience</i> , 2015, 18, 794-799.	14.8	613
4	DNA Replication Precedes Neuronal Cell Death in Alzheimer's Disease. <i>Journal of Neuroscience</i> , 2001, 21, 2661-2668.	3.6	589
5	Ectopic Cell Cycle Proteins Predict the Sites of Neuronal Cell Death in Alzheimer's Disease Brain. <i>Journal of Neuroscience</i> , 1998, 18, 2801-2807.	3.6	512
6	Cell cycle regulation in the postmitotic neuron: oxymoron or new biology?. <i>Nature Reviews Neuroscience</i> , 2007, 8, 368-378.	10.2	454
7	Neuronal Cell Death Is Preceded by Cell Cycle Events at All Stages of Alzheimer's Disease. <i>Journal of Neuroscience</i> , 2003, 23, 2557-2563.	3.6	441
8	Social Interaction and Sensorimotor Gating Abnormalities in Mice Lacking Dvl1. <i>Cell</i> , 1997, 90, 895-905.	28.9	440
9	Reimagining Alzheimer's Disease—An Age-Based Hypothesis. <i>Journal of Neuroscience</i> , 2010, 30, 16755-16762.	3.6	330
10	Cyclin-Dependent Kinase 5-Deficient Mice Demonstrate Novel Developmental Arrest in Cerebral Cortex. <i>Journal of Neuroscience</i> , 1998, 18, 6370-6377.	3.6	294
11	Divide and Die: Cell Cycle Events as Triggers of Nerve Cell Death. <i>Journal of Neuroscience</i> , 2004, 24, 9232-9239.	3.6	268
12	Pax-2 expression defines a subset of GABAergic interneurons and their precursors in the developing murine cerebellum. <i>Journal of Neurobiology</i> , 1999, 41, 281-294.	3.6	222
13	Regional variation and absence of large neurons in the cerebellum of the staggerer mouse. <i>Brain Research</i> , 1979, 172, 1-12.	2.2	196
14	Interaction of granule, Purkinje and inferior olivary neurons in lurcher chimeric mice. II. Granule cell death. <i>Brain Research</i> , 1982, 250, 358-362.	2.2	195
15	Nuclear accumulation of HDAC4 in ATM deficiency promotes neurodegeneration in ataxia telangiectasia. <i>Nature Medicine</i> , 2012, 18, 783-790.	30.7	185
16	Ectopic Cell Cycle Events Link Human Alzheimer's Disease and Amyloid Precursor Protein Transgenic Mouse Models. <i>Journal of Neuroscience</i> , 2006, 26, 775-784.	3.6	164
17	Staggerer chimeras: Intrinsic nature of purkinje cell defects and implications for normal cerebellar development. <i>Brain Research</i> , 1979, 178, 443-457.	2.2	163
18	Genomic integrity and the ageing brain. <i>Nature Reviews Neuroscience</i> , 2015, 16, 672-684.	10.2	155

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19	Cyclin-Dependent Kinase 5 Is Essential for Neuronal Cell Cycle Arrest and Differentiation. <i>Journal of Neuroscience</i> , 2005, 25, 9658-9668.	3.6	153
20	The PI3K-Akt-mTOR pathway regulates A β ² oligomer induced neuronal cell cycle events. <i>Molecular Neurodegeneration</i> , 2009, 4, 14.	10.8	151
21	EZH2-mediated H3K27 trimethylation mediates neurodegeneration in ataxia-telangiectasia. <i>Nature Neuroscience</i> , 2013, 16, 1745-1753.	14.8	143
22	Pattern Deformities and Cell Loss in Engrailed-2 Mutant Mice Suggest Two Separate Patterning Events during Cerebellar Development. <i>Journal of Neuroscience</i> , 1997, 17, 7881-7889.	3.6	136
23	Direct correlation between Purkinje and granule cell number in the cerebella of lurcher chimeras and wild-type mice. <i>Developmental Brain Research</i> , 1983, 10, 41-47.	1.7	133
24	Migration Defects of <i>cdk5</i> ^{+/+} Neurons in the Developing Cerebellum is Cell Autonomous. <i>Journal of Neuroscience</i> , 1999, 19, 6017-6026.	3.6	130
25	Cell division in the CNS: Protective response or lethal event in post-mitotic neurons?. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2007, 1772, 457-466.	3.8	130
26	Loss of Neuronal Cell Cycle Control in Ataxia-Telangiectasia: A Unified Disease Mechanism. <i>Journal of Neuroscience</i> , 2005, 25, 2522-2529.	3.6	128
27	A β ² Oligomers Induce Neuronal Cell Cycle Events in Alzheimer's Disease. <i>Journal of Neuroscience</i> , 2008, 28, 10786-10793.	3.6	126
28	Role of staggerer gene in determining cell number in cerebellar cortex. I. Granule cell death is an indirect consequence of staggerer gene action. <i>Developmental Brain Research</i> , 1983, 11, 267-274.	1.7	124
29	Microglial derived tumor necrosis factor- α drives Alzheimer's disease-related neuronal cell cycle events. <i>Neurobiology of Disease</i> , 2014, 62, 273-285.	4.4	120
30	Aldolase C/zebrin II and the regionalization of the cerebellum. <i>Journal of Molecular Neuroscience</i> , 1995, 6, 147-158.	2.3	117
31	Cytoplasmic ATM in Neurons Modulates Synaptic Function. <i>Current Biology</i> , 2009, 19, 2091-2096.	3.9	117
32	Nuclear localization of Cdk5 is a key determinant in the postmitotic state of neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 8772-8777.	7.1	111
33	NSAIDs prevent, but do not reverse, neuronal cell cycle reentry in a mouse model of Alzheimer disease. <i>Journal of Clinical Investigation</i> , 2009, 119, 3692-3702.	8.2	106
34	Cdk5 Suppresses the Neuronal Cell Cycle by Disrupting the E2F1- Δ DP1 Complex. <i>Journal of Neuroscience</i> , 2010, 30, 5219-5228.	3.6	100
35	Accumulation of Cytoplasmic DNA Due to ATM Deficiency Activates the Microglial Viral Response System with Neurotoxic Consequences. <i>Journal of Neuroscience</i> , 2019, 39, 6378-6394.	3.6	86
36	Beta-amyloid activated microglia induce cell cycling and cell death in cultured cortical neurons. <i>Neurobiology of Aging</i> , 2000, 21, 797-806.	3.1	85

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37	Age-related hyperinsulinemia leads to insulin resistance in neurons and cell-cycle-induced senescence. <i>Nature Neuroscience</i> , 2019, 22, 1806-1819.	14.8	85
38	Re-imagining Alzheimer's disease – the diminishing importance of amyloid and a glimpse of what lies ahead. <i>Journal of Neurochemistry</i> , 2017, 143, 432-444.	3.9	83
39	Re-expression of cell cycle proteins induces neuronal cell death during Alzheimer's disease. <i>Journal of Alzheimer's Disease</i> , 2002, 4, 243-247.	2.6	82
40	Ibuprofen attenuates oxidative damage through NOX2 inhibition in Alzheimer's disease. <i>Neurobiology of Aging</i> , 2012, 33, 197.e21-197.e32.	3.1	81
41	DNA damage in the oligodendrocyte lineage and its role in brain aging. <i>Mechanisms of Ageing and Development</i> , 2017, 161, 37-50.	4.6	80
42	Neurons in Vulnerable Regions of the Alzheimer's Disease Brain Display Reduced ATM Signaling. <i>ENeuro</i> , 2016, 3, ENEURO.0124-15.2016.	1.9	73
43	Glutamine Acts as a Neuroprotectant against DNA Damage, Beta-Amyloid and H2O2-Induced Stress. <i>PLoS ONE</i> , 2012, 7, e33177.	2.5	69
44	Alteration in 5-hydroxymethylcytosine-mediated epigenetic regulation leads to Purkinje cell vulnerability in ATM deficiency. <i>Brain</i> , 2015, 138, 3520-3536.	7.6	69
45	CDK5 activator protein p25 preferentially binds and activates GSK3 β . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E4887-95.	7.1	67
46	Cortical development: Receiving Reelin. <i>Current Biology</i> , 2000, 10, R162-R166.	3.9	66
47	2014 Report on the Milestones for the US National Plan to Address Alzheimer's Disease. , 2014, 10, S430-S452.		64
48	The role of ATM and DNA damage in neurons: Upstream and downstream connections. <i>DNA Repair</i> , 2013, 12, 600-604.	2.8	62
49	Neocortical Cell Migration: GABAergic Neurons and Cells in Layers I and VI Move in a Cyclin-Dependent Kinase 5-Independent Manner. <i>Journal of Neuroscience</i> , 2001, 21, 9690-9700.	3.6	59
50	ATM and ATR play complementary roles in the behavior of excitatory and inhibitory vesicle populations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E292-E301.	7.1	58
51	ATM is activated by ATP depletion and modulates mitochondrial function through NRF1. <i>Journal of Cell Biology</i> , 2019, 218, 909-928.	5.2	55
52	Role of the staggerer gene in determining Purkinje cell number in the cerebellar cortex of mouse chimeras. <i>Developmental Brain Research</i> , 1981, 1, 475-485.	1.7	54
53	Effects of Alzheimer's Disease on Different Cortical Layers: The Role of Intrinsic Differences in A β Susceptibility. <i>Journal of Neuroscience</i> , 2007, 27, 8496-8504.	3.6	54
54	Cdk5 Nuclear Localization Is p27-dependent in Nerve Cells. <i>Journal of Biological Chemistry</i> , 2010, 285, 14052-14061.	3.4	53

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55	Failed Cell Migration and Death of Purkinje Cells and Deep Nuclear Neurons in the Weaver Cerebellum. <i>Journal of Neuroscience</i> , 1997, 17, 3675-3683.	3.6	52
56	Factors in the Genetic Background Suppress the <i>Engrailed-1</i> Cerebellar Phenotype. <i>Journal of Neuroscience</i> , 2003, 23, 5105-5112.	3.6	52
57	Cell Loss in the Inferior Olive of the Staggerer Mutant Mouse is an Indirect Effect of the Gene. <i>Journal of Neurogenetics</i> , 1990, 6, 229-241.	1.4	50
58	Progressive atrophy of cerebellar Purkinje cell dendrites during aging of the heterozygous staggerer mouse (<i>Rora</i> ^{+/sg}). <i>Developmental Brain Research</i> , 2001, 126, 201-209.	1.7	50
59	DNA damage and cell cycle events implicate cerebellar dentate nucleus neurons as targets of Alzheimer's disease. <i>Molecular Neurodegeneration</i> , 2010, 5, 60.	10.8	50
60	Cortical development: Layers of complexity. <i>Current Biology</i> , 1997, 7, R231-R234.	3.9	47
61	Role of staggerer gene in determining cell number in cerebellar cortex. II. Granule cell death and persistence of the external granule cell layer in young mouse chimeras. <i>Developmental Brain Research</i> , 1984, 12, 271-283.	1.7	46
62	Differential Responses of Individuals with Late-Stage Dementia to Two Novel Environments: A Multimedia Room and an Interior Garden. <i>Journal of Alzheimer's Disease</i> , 2014, 42, 985-998.	2.6	46
63	The numerical matching of source and target populations in the CNS: the inferior olive to Purkinje cell projection. <i>Developmental Brain Research</i> , 1996, 96, 28-35.	1.7	43
64	Quantitative examination of the deep cerebellar nuclei in the staggerer mutant mouse. <i>Brain Research</i> , 1981, 215, 49-59.	2.2	42
65	Cdk5 and the non-catalytic arrest of the neuronal cell cycle. <i>Cell Cycle</i> , 2008, 7, 3487-3490.	2.6	42
66	Nucleocytoplasmic Cdk5 is involved in neuronal cell cycle and death in post-mitotic neurons. <i>Cell Cycle</i> , 2011, 10, 1208-1214.	2.6	42
67	Neuronal cell loss in heterozygous staggerer mutant mice: a model for genetic contributions to the aging process. <i>Developmental Brain Research</i> , 1992, 67, 153-160.	1.7	41
68	E2F1 Works as a Cell Cycle Suppressor in Mature Neurons. <i>Journal of Neuroscience</i> , 2007, 27, 12555-12564.	3.6	39
69	A Comparative Study of Five Mouse Models of Alzheimer's Disease: Cell Cycle Events Reveal New Insights into Neurons at Risk for Death. <i>International Journal of Alzheimer's Disease</i> , 2011, 2011, 1-10.	2.0	39
70	Developmental studies of the inferior olivary nucleus in staggerer mutant mice. <i>Developmental Brain Research</i> , 1994, 82, 18-28.	1.7	38
71	Non-Neuronal Cells Are Required to Mediate the Effects of Neuroinflammation: Results from a Neuron-Enriched Culture System. <i>PLoS ONE</i> , 2016, 11, e0147134.	2.5	38
72	Stunted morphologies of cerebellar Purkinje cells in <i>lurcher</i> and <i>staggerer</i> mice are cell-intrinsic effects of the mutant genes. <i>Journal of Comparative Neurology</i> , 1995, 357, 65-75.	1.6	37

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73	DNA damage-associated oligodendrocyte degeneration precedes amyloid pathology and contributes to Alzheimer's disease and dementia. <i>Alzheimer's and Dementia</i> , 2018, 14, 664-679.	0.8	37
74	The Interaction of the Atm Genotype with Inflammation and Oxidative Stress. <i>PLoS ONE</i> , 2014, 9, e85863.	2.5	36
75	Interaction of granule, Purkinje and inferior olivary neurons in Lurcher chimaeric mice. <i>Development (Cambridge)</i> , 1982, 68, 87-98.	2.5	36
76	The Role of Tangential Migration in the Establishment of Mammalian Cortex. <i>Neuron</i> , 2001, 31, 175-178.	8.1	35
77	ATM loss disrupts the autophagy-lysosomal pathway. <i>Autophagy</i> , 2021, 17, 1998-2010.	9.1	35
78	The involvement of cell cycle events in the pathogenesis of Alzheimer's disease. <i>Alzheimer's Research and Therapy</i> , 2010, 2, 13.	6.2	34
79	Purkinje cell loss in heterozygous staggerer mutant mice during aging. <i>Developmental Brain Research</i> , 1997, 98, 1-8.	1.7	33
80	Cdk5 Levels Oscillate during the Neuronal Cell Cycle. <i>Journal of Biological Chemistry</i> , 2012, 287, 25985-25994.	3.4	33
81	The impact of glutamine supplementation on the symptoms of ataxia-telangiectasia: a preclinical assessment. <i>Molecular Neurodegeneration</i> , 2016, 11, 60.	10.8	29
82	Selective loss of 5hmC promotes neurodegeneration in the mouse model of Alzheimer's disease. <i>FASEB Journal</i> , 2020, 34, 16364-16382.	0.5	29
83	Patterns of cell lineage in the cerebral cortex reveal evidence for developmental boundaries. <i>Experimental Neurology</i> , 1990, 109, 131-139.	4.1	27
84	Context-Dependent Functions of E2F1: Cell Cycle, Cell Death, and DNA Damage Repair in Cortical Neurons. <i>Molecular Neurobiology</i> , 2020, 57, 2377-2390.	4.0	27
85	Numerical matching in the mammalian CNS: Lack of a competitive advantage of early over late-generated cerebellar granule cells. <i>Journal of Comparative Neurology</i> , 1989, 283, 118-128.	1.6	26
86	Commentary on "Recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease." Addressing the challenge of Alzheimer's disease in the 21st century. <i>Alzheimer's and Dementia</i> , 2011, 7, 335-337.	0.8	26
87	Post-mitotic role of the cell cycle machinery. <i>Current Opinion in Cell Biology</i> , 2013, 25, 711-716.	5.4	26
88	Stable Brain <i>ATM</i> Message and Residual Kinase-Active ATM Protein in Ataxia-Telangiectasia. <i>Journal of Neuroscience</i> , 2011, 31, 7568-7577.	3.6	25
89	Elements between the protein-coding regions of the adjacent $\gamma 4$ and $\gamma 3$ acetylcholine receptor genes direct neuron-specific expression in the central nervous system. , 1997, 32, 311-324.		24
90	Cyclin-Dependent Kinase 5-Dependent BAG3 Degradation Modulates Synaptic Protein Turnover. <i>Biological Psychiatry</i> , 2020, 87, 756-769.	1.3	23

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91	Studies of the dendritic tree of wild-type cerebellar Purkinje cells in lurcher chimeric mice. Journal of Comparative Neurology, 1990, 297, 121-131.	1.6	22
92	The Roles of Cdk5-Mediated Subcellular Localization of FOXO1 in Neuronal Death. Journal of Neuroscience, 2015, 35, 2624-2635.	3.6	22
93	ATM protein is located on presynaptic vesicles and its deficit leads to failures in synaptic plasticity. Journal of Neurophysiology, 2016, 116, 201-209.	1.8	22
94	The contributions of unscheduled neuronal cell cycle events to the death of neurons in Alzheimer's disease. Frontiers in Bioscience - Elite, 2012, E4, 2101.	1.8	21
95	Ibuprofen prevents progression of ataxia telangiectasia symptoms in ATM-deficient mice. Journal of Neuroinflammation, 2018, 15, 308.	7.2	18
96	Cortical development and topographic maps: patterns of cell dispersion in developing cerebral cortex. Current Opinion in Neurobiology, 1994, 4, 108-111.	4.2	15
97	Individual Cytokines Modulate the Neurological Symptoms of ATM Deficiency in a Region Specific Manner. ENeuro, 2015, 2, ENEURO.0032-15.2015.	1.9	15
98	CELL NUMBER IN THE INFERIOR OLIVE OF NERVOUS AND LEANER MUTANT MICE. Journal of Neurogenetics, 2004, 18, 327-339.	1.4	14
99	Changes in visual interaction: Viewing a Japanese garden directly, through glass or as a projected image. Journal of Environmental Psychology, 2018, 60, 116-121.	5.1	14
100	DNA Repair Inhibition Leads to Active Export of Repetitive Sequences to the Cytoplasm Triggering an Inflammatory Response. Journal of Neuroscience, 2021, 41, 9286-9307.	3.6	13
101	The fine structure of the Purkinje cell and its afferents in lurcher chimeric mice. Journal of Comparative Neurology, 1991, 305, 421-434.	1.6	12
102	ATM and the epigenetics of the neuronal genome. Mechanisms of Ageing and Development, 2013, 134, 434-439.	4.6	12
103	The Positive Effects of Viewing Gardens for Persons with Dementia. Journal of Alzheimer's Disease, 2018, 66, 1705-1720.	2.6	11
104	A genetic study of the suppressors of the Engrailed-1 cerebellar phenotype. Brain Research, 2007, 1140, 170-178.	2.2	10
105	Apolipoprotein E ϵ 4 Mediates Myelin Breakdown by Targeting Oligodendrocytes in Sporadic Alzheimer Disease. Journal of Neuropathology and Experimental Neurology, 2022, 81, 717-730.	1.7	10
106	Purkinje cell dendrites in staggerer? wild type mouse chimeras lack the aberrant morphologies found in lurcher? wild type chimeras. Journal of Comparative Neurology, 1993, 331, 540-550.	1.6	9
107	Fallacies in Neuroscience: The Alzheimer's Edition. ENeuro, 2022, 9, ENEURO.0530-21.2021.	1.9	9
108	Chapter 3 Roles of Cell Lineage in the Developing Mammalian Brain. Current Topics in Developmental Biology, 1987, 21, 65-97.	2.2	8

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109	Selective Vulnerability of Neurons in Primary Cultures and in Neurodegenerative Diseases. Reviews in the Neurosciences, 2008, 19, 317-26.	2.9	8
110	Of neurons and oncogenes. Trends in Neurosciences, 1985, 8, 511-512.	8.6	7
111	Dissecting complex genetic interactions that influence the Engrailed-1 limb phenotype. Mammalian Genome, 2004, 15, 352-360.	2.2	6
112	Marine bacterial extracts as a new rich source of drugs against Alzheimer's disease. Journal of Neurochemistry, 2020, 152, 493-508.	3.9	6
113	Abnormal Purkinje cell dendrites in Lurcher chimeric mice result from a deafferentation-induced atrophy. , 1996, 29, 330-340.		5
114	Testing the Neuroprotective Properties of PCSO-524® Using a Neuronal Cell Cycle Suppression Assay. Marine Drugs, 2019, 17, 79.	4.6	5
115	The Mechanism of Relaxation by Viewing a Japanese Garden: A Pilot Study. Herd, 2020, 13, 31-43.	1.5	5
116	Thoughts on the Cerebellum as a Model for Cerebral Cortical Development and Evolution. Novartis Foundation Symposium, 2008, 228, 15-29.	1.1	4
117	Breaking news: thinking may be bad for DNA. Nature Neuroscience, 2013, 16, 518-519.	14.8	4
118	Identifying a Population of Glial Progenitors That Have Been Mistaken for Neurons in Embryonic Mouse Cortical Culture. ENeuro, 2021, 8, ENEURO.0388-20.2020.	1.9	2
119	The molecular genetics of myelin basic protein. Trends in Neurosciences, 1984, 7, 36-37.	8.6	1
120	Loopholes in the DNA contract kill neurons. Nature Neuroscience, 2017, 20, 1192-1194.	14.8	1
121	Asymmetric left-right hippocampal glutamatergic modulation of cognitive control in ApoE isoform subjects is unrelated to neuroinflammation. European Journal of Neuroscience, 2021, 54, 5310-5326.	2.6	1
122	Pax-2 expression defines a subset of GABAergic interneurons and their precursors in the developing murine cerebellum. , 1999, 41, 281.		1
123	The Use of Experimental Genetics to Study Pattern Formation in the Mammalian CNS. , 1992, , 99-111.		1
124	Monoclonal antibodies reveal geometric relationships in the rat cerebellar cortex. Trends in Neurosciences, 1984, 7, 361-362.	8.6	0
125	Ataxia-Telangiectasia and the Biology of Ataxia-Telangiectasia Mutated (ATM). , 2015, , 1025-1032.		0
126	Alterations in epigenetic regulation contribute to neurodegeneration of ataxia-telangiectasia. , 2019, , 119-133.		0

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127	The Role of Cdk5 as a Cell Cycle Suppressor in Post-mitotic Neurons. Research and Perspectives in Alzheimer's Disease, 2011, , 17-25.	0.1	0
128	Neurodegeneration and Loss of Cell Cycle Control in Postmitotic Neurons. , 2006, , 281-297.		0