Siegfried Hekimi

List of Publications by Year
in descending order

103 papers	12,170 citations	43973 48 h-index	32761 100 g-index
149 all docs	149 docs citations	149 times ranked	10652 citing authors

#	Article	IF	Citations
1	Superoxide dismutases: Dual roles in controlling ROS damage and regulating ROS signaling. Journal of Cell Biology, 2018, 217, 1915-1928.	2.3	1,091
2	The genetics of caloric restriction in Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 13091-13096.	3.3	863
3	Mitochondrial Electron Transport Is a Key Determinant of Life Span in Caenorhabditis elegans. Developmental Cell, 2001, 1, 633-644.	3.1	572
4	A Mitochondrial Superoxide Signal Triggers Increased Longevity in Caenorhabditis elegans. PLoS Biology, 2010, 8, e1000556.	2.6	519
5	Determination of Life-Span in Caenorhabditis elegans by Four Clock Genes. Science, 1996, 272, 1010-1013.	6.0	507
6	Taking a â€œgoodâ€•look at free radicals in the aging process. Trends in Cell Biology, 2011, 21, 569-576.	3.6	484
7	Deletion of the Mitochondrial Superoxide Dismutase sod-2 Extends Lifespan in Caenorhabditis elegans. PLoS Genetics, 2009, 5, e1000361.	1.5	416
8	Genetics and the Specificity of the Aging Process. Science, 2003, 299, 1351-1354.	6.0	414
9	Mutations in the clk-1 gene of Caenorhabditis elegans affect developmental and behavioral timing.. Genetics, 1995, 139, 1247-1259.	1.2	384
10	The Intrinsic Apoptosis Pathway Mediates the Pro-Longevity Response to Mitochondrial ROS in C.Âelegans. Cell, 2014, 157, 897-909.	13.5	327
11	Coenzyme Q10 restores oocyte mitochondrial function and fertility during reproductive aging. Aging Cell, 2015, 14, 887-895.	3.0	313
12	Structural and Functional Conservation of theCaenorhabditis elegansTiming Geneclk-1. Science, 1997, 275, 980-983.	6.0	312
13	Evolutionary conservation of the clk-1-dependent mechanism of longevity: loss of mclk1 increases cellular fitness and lifespan in mice. Genes and Development, 2005, 19, 2424-2434.	2.7	309
14	Superoxide dismutase is dispensable for normal animal lifespan. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5785-5790.	3.3	283
15	CLK-1 controls respiration, behavior and aging in the nematode Caenorhabditis elegans. EMBO Journal, 1999, 18, 1783-1792.	3.5	250
16	When a theory of aging ages badly. Cellular and Molecular Life Sciences, 2010, 67, 1-8.	2.4	232
17	Meiotic recombination, noncoding DNA and genomic organization in Caenorhabditis elegans.. Genetics, 1995, 141, 159-179.	1.2	231
18	Mitochondrial dysfunction and longevity in animals: Untangling the knot. Science, 2015, 350, 1204-1207.	6.0	213

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19	Two modes of mitochondrial dysfunction lead independently to lifespan extension in <i>Caenorhabditis elegans</i>. Aging Cell, 2010, 9, 433-447.	3.0	208
20	Early Mitochondrial Dysfunction in Long-lived Mclk1+/- Mice. Journal of Biological Chemistry, 2008, 283, 26217-26227.	1.6	194
21	Understanding Ubiquinone. Trends in Cell Biology, 2016, 26, 367-378.	3.6	192
22	Altered Quinone Biosynthesis in the Long-lived clk-1Mutants of Caenorhabditis elegans. Journal of Biological Chemistry, 2001, 276, 7713-7716.	1.6	189
23	The unc-18 Gene Encodes a Novel Protein Affecting the Kinetics of Acetylcholine Metabolism in the Nematode Caenorhabditis elegans. Journal of Neurochemistry, 1992, 58, 1517-1525.	2.1	170
24	Mitochondrial and Cytoplasmic ROS Have Opposing Effects on Lifespan. PLoS Genetics, 2015, 11, e1004972.	1.5	165
25	Reactive Oxygen Species and Aging in<i>Caenorhabditis elegans</i>: Causal or Casual Relationship?. Antioxidants and Redox Signaling, 2010, 13, 1911-1953.	2.5	158
26	A Measurable Increase in Oxidative Damage Due to Reduction in Superoxide Detoxification Fails to Shorten the Life Span of Long-Lived Mitochondrial Mutants of <i>Caenorhabditis elegans</i>. Genetics, 2007, 177, 2063-2074.	1.2	147
27	Ubiquinone Is Necessary for Mouse Embryonic Development but Is Not Essential for Mitochondrial Respiration. Journal of Biological Chemistry, 2001, 276, 46160-46164.	1.6	117
28	Redox Regulation of Germline and Vulval Development in Caenorhabditis elegans. Science, 2003, 302, 1779-1782.	6.0	111
29	Elevated Mitochondrial Reactive Oxygen Species Generation Affects the Immune Response via Hypoxia-Inducible Factor-1Î± in Long-Lived <i>Mclk1</i>+/âˆ’ Mouse Mutants. Journal of Immunology, 2010, 184, 582-590.	0.4	109
30	FUdR causes a twofold increase in the lifespan of the mitochondrial mutant gas-1. Mechanisms of Ageing and Development, 2011, 132, 519-521.	2.2	108
31	Mitochondrial function and lifespan of mice with controlled ubiquinone biosynthesis. Nature Communications, 2015, 6, 6393.	5.8	102
32	Molecular genetics of life span in C. elegans: How much does it teach us?. Trends in Genetics, 1998, 14, 14-20.	2.9	101
33	Decreased Energy Metabolism Extends Life Span in<i>Caenorhabditis elegans</i>Without Reducing Oxidative Damage. Genetics, 2010, 185, 559-571.	1.2	95
34	Epithelial Cell Death Is an Important Contributor to Oxidant-mediated Acute Lung Injury. American Journal of Respiratory and Critical Care Medicine, 2011, 183, 1043-1054.	2.5	93
35	Reversal of the Mitochondrial Phenotype and Slow Development of Oxidative Biomarkers of Aging in Long-lived Mclk1+/âˆ’ Mice. Journal of Biological Chemistry, 2009, 284, 20364-20374.	1.6	81
36	clk-1, mitochondria, and physiological rates. BioEssays, 2000, 22, 48-56.	1.2	80

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37	What keeps C. elegans regular: the genetics of defecation. Trends in Genetics, 2006, 22, 571-579.	2.9	77
38	Viable maternal-effect mutations that affect the development of the nematode Caenorhabditis elegans.. Genetics, 1995, 141, 1351-1364.	1.2	67
39	Genetics of lifespan in C. elegans: molecular diversity, physiological complexity, mechanistic simplicity. Trends in Genetics, 2001, 17, 712-718.	2.9	66
40	Ubiquinone Is Necessary for Caenorhabditis elegansDevelopment at Mitochondrial and Non-mitochondrial Sites. Journal of Biological Chemistry, 2002, 277, 2202-2206.	1.6	64
41	Mitochondrial ROS and the Effectors of the Intrinsic Apoptotic Pathway in Aging Cells: The Discerning Killers!. Frontiers in Genetics, 2016, 7, 161.	1.1	64
42	The<i>C. elegans</i>maternal-effect gene<i>clk-2</i>is essential for embryonic development, encodes a protein homologous to yeast Tel2p and affects telomere length. Development (Cambridge), 2001, 128, 4045-4055.	1.2	63
43	Antioxidants reveal an inverted Uâ€shaped doseâ€response relationship between reactive oxygen species levels and the rate of aging in <i>Caenorhabditis elegans</i>. Aging Cell, 2017, 16, 104-112.	3.0	62
44	How genetic analysis tests theories of animal aging. Nature Genetics, 2006, 38, 985-991.	9.4	57
45	Molecular genetics of ubiquinone biosynthesis in animals. Critical Reviews in Biochemistry and Molecular Biology, 2013, 48, 69-88.	2.3	57
46	CEP-1, the Caenorhabditis elegans p53 Homolog, Mediates Opposing Longevity Outcomes in Mitochondrial Electron Transport Chain Mutants. PLoS Genetics, 2014, 10, e1004097.	1.5	57
47	Pathogenicity of two <i>COQ7</i> mutations and responses to 2,4â€dihydroxybenzoate bypass treatment. Journal of Cellular and Molecular Medicine, 2017, 21, 2329-2343.	1.6	57
48	Axonal guidance defects in a Caenorhabditis elegans mutant reveal cell- extrinsic determinants of neuronal morphology. Journal of Neuroscience, 1993, 13, 4254-4271.	1.7	53
49	The Levels of the RoRNP-Associated Y RNA Are Dependent Upon the Presence of ROP-1, the Caenorhabditis elegans Ro60 Protein. Genetics, 1999, 151, 143-150.	1.2	50
50	The submitochondrial distribution of ubiquinone affects respiration in long-lived <i>Mclk1+/â^'</i> mice. Journal of Cell Biology, 2012, 199, 215-224.	2.3	46
51	The Complexity of Making Ubiquinone. Trends in Endocrinology and Metabolism, 2019, 30, 929-943.	3.1	46
52	The Anti-neurodegeneration Drug Clioquinol Inhibits the Aging-associated Protein CLK-1. Journal of Biological Chemistry, 2009, 284, 314-323.	1.6	45
53	A Mild Impairment of Mitochondrial Electron Transport Has Sex-Specific Effects on Lifespan and Aging in Mice. PLoS ONE, 2011, 6, e26116.	1.1	45
54	Identification and purification of two precursors of the insect neuropeptide adipokinetic hormone. Journal of Neuroscience, 1987, 7, 2773-2784.	1.7	44

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55	Biosynthesis of adipokinetic hormones (AKHs): further characterization of precursors and identification of novel products of processing. Journal of Neuroscience, 1989, 9, 996-1003.	1.7	43
56	Quinones in long-livedclk-1mutants ofCaenorhabditis elegans. FEBS Letters, 2002, 512, 33-37.	1.3	43
57	Regulation of Physiological Rates in Caenorhabditis elegans by a tRNA-Modifying Enzyme in the Mitochondria. Genetics, 2001, 159, 147-157.	1.2	43
58	Phenotypic and Suppressor Analysis of Defecation in <i>clk-1</i> Mutants Reveals That Reaction to Changes in Temperature Is an Active Process in <i>Caenorhabditis elegans</i>. Genetics, 2001, 159, 997-1006.	1.2	42
59	Different Mechanisms of Longevity in Long-Lived Mouse and <i>Caenorhabditis elegans</i> Mutants Revealed by Statistical Analysis of Mortality Rates. Genetics, 2016, 204, 905-920.	1.2	37
60	Human CLK2 Links Cell Cycle Progression, Apoptosis, and Telomere Length Regulation. Journal of Biological Chemistry, 2003, 278, 21678-21684.	1.6	36
61	Mouse CLK-1 Is Imported into Mitochondria by an Unusual Process That Requires a Leader Sequence but No Membrane Potential. Journal of Biological Chemistry, 2001, 276, 29218-29225.	1.6	35
62	Mitochondrial respiration without ubiquinone biosynthesis. Human Molecular Genetics, 2013, 22, 4768-4783.	1.4	35
63	Impact papers on aging in 2009. Aging, 2010, 2, 111-121.	1.4	35
64	Dimer structure of a neuropeptide precursor established: Consequences for processing. Neuron, 1989, 2, 1363-1368.	3.8	34
65	SK channel-mediated metabolic escape to glycolysis inhibits ferroptosis and supports stress resistance in C. elegans. Cell Death and Disease, 2020, 11, 263.	2.7	34
66	Regulation of neuropeptide stoichiometry in neurosecretory cells. Journal of Neuroscience, 1991, 11, 3246-3256.	1.7	33
67	Genetic and molecular characterization of CLK-1/mCLK1, a conserved determinant of the rate of aging. Experimental Gerontology, 2006, 41, 940-951.	1.2	33
68	Sensitivity of Caenorhabditis elegans clk-1 Mutants toUbiquinone Side-chain Length Reveals Multiple Ubiquinone-dependent Processes. Journal of Biological Chemistry, 2003, 278, 41013-41018.	1.6	32
69	Thiamine Pyrophosphate Biosynthesis and Transport in the Nematode Caenorhabditis elegansSequence data from this article have been deposited with the EMBL/GenBank Data Libraries under accession no. AY513235.. Genetics, 2004, 168, 845-854.	1.2	31
70	Estimating the occurrence of primary ubiquinone deficiency by analysis of large-scale sequencing data. Scientific Reports, 2017, 7, 17744.	1.6	31
71	Why only time will tell. Mechanisms of Ageing and Development, 2001, 122, 571-594.	2.2	30
72	ROP-1, an RNA quality-control pathway component, affects Caenorhabditis elegans dauer formation. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 13233-13238.	3.3	29

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73	Uncoupling the Pleiotropic Phenotypes of clk-1 with tRNA Missense Suppressors in Caenorhabditis elegans. Molecular and Cellular Biology, 2006, 26, 3976-3985.	1.1	28
74	Many possible maximum lifespan trajectories. Nature, 2017, 546, E8-E9.	13.7	25
75	Cell-specific transcriptional control of mitochondrial metabolism by TIF1Î³ drives erythropoiesis. Science, 2021, 372, 716-721.	6.0	25
76	Lipid transport and signaling in <i>Caenorhabditis elegans</i>. Developmental Dynamics, 2010, 239, 1365-1377.	0.8	24
77	A single biochemical activity underlies the pleiotropy of the aging-related protein CLK-1. Scientific Reports, 2017, 7, 859.	1.6	24
78	Molecular Mechanism of Maternal Rescue in the clk-1 Mutants of Caenorhabditis elegans. Journal of Biological Chemistry, 2003, 278, 49555-49562.	1.6	21
79	Functional Requirements for Heparan Sulfate Biosynthesis in Morphogenesis and Nervous System Development in C. elegans. PLoS Genetics, 2017, 13, e1006525.	1.5	19
80	The C. elegans maternal-effect gene clk-2 is essential for embryonic development, encodes a protein homologous to yeast Tel2p and affects telomere length. Development (Cambridge), 2001, 128, 4045-55.	1.2	19
81	Enhanced immunity in slowly aging mutant mice with high mitochondrial oxidative stress. OncoImmunology, 2013, 2, e23793.	2.1	18
82	Micellization of coenzyme Q by the fungicide caspofungin allows for safe intravenous administration to reach extreme supraphysiological concentrations. Redox Biology, 2020, 36, 101680.	3.9	16
83	Lifelong protection from global cerebral ischemia and reperfusion in long-lived Mclk1+/âˆ’ mutants. Experimental Neurology, 2010, 223, 557-565.	2.0	15
84	An Enhanced Immune Response of Mclk1+/âˆ’ Mutant Mice Is Associated with Partial Protection from Fibrosis, Cancer and the Development of Biomarkers of Aging. PLoS ONE, 2012, 7, e49606.	1.1	15
85	ROS regulation of RAS and vulva development in Caenorhabditis elegans. PLoS Genetics, 2020, 16, e1008838.	1.5	14
86	Crossroads of Aging in the Nematode Caenorhabditis elegans. Results and Problems in Cell Differentiation, 2000, 29, 81-112.	0.2	14
87	Mitochondrial Oxidative Stress Alters a Pathway in Caenorhabditis elegans Strongly Resembling That of Bile Acid Biosynthesis and Secretion in Vertebrates. PLoS Genetics, 2012, 8, e1002553.	1.5	13
88	Cellular and axonal migrations are misguided along both body axes in the maternal-effect <i>mau-2</i> mutants of <i>Caenorhabditis elegans</i>. Development (Cambridge), 1997, 124, 5115-5126.	1.2	13
89	Antisera against AKHs and AKH precursors for experimental studies of an insect neurosecretory system. Insect Biochemistry, 1989, 19, 79-83.	1.8	11
90	A neuron-specific antigen in C. elegans allows visualization of the entire nervous system. Neuron, 1990, 4, 855-865.	3.8	11

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91	A novel COQ7 mutation causing primarily neuromuscular pathology and its treatment options. Molecular Genetics and Metabolism Reports, 2022, 31, 100877.	0.4	10
92	Evolutionary conservation of drug action on lipoprotein metabolism-related targets. Journal of Lipid Research, 2008, 49, 74-83.	2.0	7
93	Long-lived mutants, the rate of aging, telomeres and the germline in Caenorhabditis elegans. Mechanisms of Ageing and Development, 2002, 123, 869-880.	2.2	6
94	Minimal mitochondrial respiration is required to prevent cell death by inhibition of mTOR signaling in CoQ-deficient cells. Cell Death Discovery, 2021, 7, 201.	2.0	6
95	Assessing the function of the Ro ribonucleoprotein complex using<i>Caenorhabditis elegans</i>as a biological tool. Biochemistry and Cell Biology, 1999, 77, 349-354.	0.9	5
96	The age of heterozygosity. Age, 2006, 28, 201-208.	3.0	3
97	The impact of mitochondrial oxidative stress on bile acid-like molecules inC. elegansprovides a new perspective on human metabolic diseases. Worm, 2013, 2, e21457.	1.0	3
98	Proteostasis or Aging: Let the CHIPs Fall Where They May. Developmental Cell, 2017, 41, 126-128.	3.1	3
99	Locust Adipokinetic Hormones: Molecular Biology of Biosynthesis. , 1990, , 189-197.		3
100	Compensatory elevation of voluntary activity in mouse mutants with impaired mitochondrial energy metabolism. Physiological Reports, 2014, 2, e12214.	0.7	2
101	Mclk1+/- mice are not resistant to the development of atherosclerosis. Lipids in Health and Disease, 2009, 8, 16.	1.2	1
102	Making a splash with splicing. Cell Research, 2017, 27, 457-458.	5.7	0
103	Phylogenetic ubiquity of the effects of altered ubiquinone biosynthesis on survival. Aging, 2011, 3, 184-185.	1.4	0