Axel Kowald

List of Publications by Year
in descending order

52 papers	1,789 citations	236925 25 h-index	276875 41 g-index
55 all docs	55 docs citations	55 times ranked	2465 citing authors

#	Article	IF	Citations
1	Morpho-dynamic changes of mitochondria during ageing of human endothelial cells. Mechanisms of Ageing and Development, 2005, 126, 813-821.	4.6	140
2	Accumulation of Defective Mitochondria through Delayed Degradation of Damaged Organelles and Its Possible Role in the Ageing of Post-mitotic and Dividing Cells. Journal of Theoretical Biology, 2000, 202, 145-160.	1.7	114
3	Can aging be programmed? A critical literature review. Aging Cell, 2016, 15, 986-998.	6.7	114
4	Evolution of the mitochondrial fusion–fission cycle and its role in aging. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10237-10242.	7.1	113
5	The free–radical theory of ageing – older, wiser and still alive. BioEssays, 2012, 34, 692-700.	2.5	108
6	Systems biology standards—the community speaks. Nature Biotechnology, 2007, 25, 390-391.	17.5	87
7	Single-cell analyses of aging, inflammation and senescence. Ageing Research Reviews, 2020, 64, 101156.	10.9	85
8	On the evolution of cellular senescence. Aging Cell, 2020, 19, e13270.	6.7	84
9	Profiling of Alopecia Areata Autoantigens Based on Protein Microarray Technology. Molecular and Cellular Proteomics, 2005, 4, 1382-1390.	3.8	67
10	Quality matters: how does mitochondrial network dynamics and quality control impact on mtDNA integrity?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130442.	4.0	63
11	Transcription could be the key to the selection advantage of mitochondrial deletion mutants in aging. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2972-2977.	7.1	54
12	Finding Kinetic Parameters Using Text Mining. OMICS A Journal of Integrative Biology, 2004, 8, 131-152.	2.0	47
13	The mitochondrial theory of aging: Do damaged mitochondria accumulate by delayed degradation?. Experimental Gerontology, 1999, 34, 605-612.	2.8	46
14	The Mitochondrial Theory of Aging. NeuroSignals, 2001, 10, 162-175.	0.9	45
15	On the relevance of mitochondrial fusions for the accumulation of mitochondrial deletion mutants: A modelling study. Aging Cell, 2005, 4, 273-283.	6.7	43
16	A systems biological analysis links ROS metabolism to mitochondrial protein quality control. Mechanisms of Ageing and Development, 2012, 133, 331-337.	4.6	43
17	Alternative pathways as mechanism for the negative effects associated with overexpression of superoxide dismutase. Journal of Theoretical Biology, 2006, 238, 828-840.	1.7	42
18	Mitochondrial mutations and aging: random drift is insufficient to explain the accumulation of mitochondrial deletion mutants in short–lived animals. Aging Cell, 2013, 12, 728-731.	6.7	40

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19	Lifespan does not measure ageing. Biogerontology, 2002, 3, 187-190.	3.9	33
20	Serumâ€autoantibodies for discovery of prostate cancer specific biomarkers. Prostate, 2012, 72, 427-436.	2.3	33
21	A modelling approach to quantify dynamic crosstalk between the pheromone and the starvation pathway in baker's yeast. FEBS Journal, 2006, 273, 3520-3533.	4.7	31
22	Resolving the Enigma of the Clonal Expansion of mtDNA Deletions. Genes, 2018, 9, 126.	2.4	31
23	Estimation of the mtDNA mutation rate in aging mice by proteome analysis and mathematical modeling. Experimental Gerontology, 2006, 41, 11-24.	2.8	30
24	Alternative Pathways Might Mediate Toxicity of High Concentrations of Superoxide Dismutase. Annals of the New York Academy of Sciences, 2004, 1019, 370-374.	3.8	28
25	Mitochondrial mutations and ageing: Can mitochondrial deletion mutants accumulate via a size based replication advantage?. Journal of Theoretical Biology, 2014, 340, 111-118.	1.7	28
26	Evolutionary significance of ageing in the wild. Experimental Gerontology, 2015, 71, 89-94.	2.8	28
27	Off-target activity of TNF-Î± inhibitors characterized by protein biochips. Analytical and Bioanalytical Chemistry, 2008, 391, 1713-1720.	3.7	25
28	The preventive strategy for pandemics in the elderly is to collect in advance samples & data to counteract chronic inflammation (inflammaging). Ageing Research Reviews, 2020, 62, 101091.	10.9	20
29	Investigation of autoantibody profiles for cerebrospinal fluid biomarker discovery in patients with relapsingâ€"remitting multiple sclerosis. Journal of Neuroimmunology, 2012, 242, 26-32.	2.3	18
30	Directionality theory: a computational study of an entropic principle in evolutionary processes. Proceedings of the Royal Society B: Biological Sciences, 2005, 272, 741-749.	2.6	15
31	Mathematical Models of Mitochondrial Aging and Dynamics. Progress in Molecular Biology and Translational Science, 2014, 127, 63-92.	1.7	15
32	A tree-based decision rule for identifying profile groups of cases without predefined classes: application in diffuse large B-cell lymphomas. Computers in Biology and Medicine, 2007, 37, 637-641.	7.0	14
33	Telomere Length in Peripheral Blood Mononuclear Cells of Patients on Chronic Hemodialysis Is Related With Telomerase Activity and Treatment Duration. Artificial Organs, 2015, 39, 756-764.	1.9	12
34	Forest classification trees and forest support vector machines algorithms: Demonstration using microarray data. Computers in Biology and Medicine, 2010, 40, 519-524.	7.0	11
35	Senolytics and the compression of late-life mortality. Experimental Gerontology, 2021, 155, 111588.	2.8	11
36	The evolution and role of mitochondrial fusion and fission in aging and disease. Communicative and Integrative Biology, 2011, 4, 627-629.	1.4	10

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37	Non-parametric classification of protein secondary structures. Computers in Biology and Medicine, 2006, 36, 145-156.	7.0	9
38	New Analytical Tools for Studying Autoimmune Diseases. Current Pharmaceutical Design, 2006, 12, 3735-42.	1.9	7
39	The evolution and role of mitochondrial fusion and fission in aging and disease. Communicative and Integrative Biology, 2011, 4, 627-9.	1.4	7
40	A mathematical model of HIV dynamics in the presence of a rescuing virus with replication deficiency. Theory in Biosciences, 2011, 130, 127-134.	1.4	5
41	Text Mining for Systems Modeling. Methods in Molecular Biology, 2011, 696, 305-318.	0.9	5
42	Biomarkers of geroprotection and cardiovascular health: An overview of omics studies and established clinical biomarkers in the context of diet. Critical Reviews in Food Science and Nutrition, 2023, 63, 2426-2446.	10.3	5
43	Towards biomarkers for outcomes after pancreatic ductal adenocarcinoma and ischaemic stroke, with focus on (co)-morbidity and ageing/cellular senescence (SASKit): protocol for a prospective cohort study. BMJ Open, 2020, 10, e039560.	1.9	5
44	Modeling the Role of Mitochondrial Mutations in Cellular Aging. Rejuvenation Research, 1999, 2, 243-253.	0.2	4
45	A comparison of amino acid distance measures using procrustes analysis. Computers in Biology and Medicine, 1999, 29, 283-288.	7.0	4
46	Theoretical Gompertzian implications on life span variability among genotypically identical animals. Mechanisms of Ageing and Development, 1999, 110, 101-107.	4.6	3
47	Critique of directionality theory. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 1183-1186.	2.6	2
48	Standards, Tools, and Databases for the Analysis of Yeast â€˜Omics Data. Methods in Molecular Biology, 2011, 759, 345-365.	0.9	2
49	The glyoxalase system as an example of a cellular maintenance pathway with relevance to aging. Aging, 2011, 3, 17-18.	3.1	2
50	Mathematical Modeling of the Aging Process. , 2009, , 312-330.		1
51	Disposable Soma Aging Theory. , 2019, , 1-6.		0
52	Disposable Soma Aging Theory. , 2021, , 1481-1487.		0