Alicia J Kowaltowski

List of Publications by Year
in descending order

126 papers	10,190 citations	36303 51 h-index	34986 98 g-index
136 all docs	136 docs citations	136 times ranked	12357 citing authors

#	Article	IF	Citations
1	Mitochondria and reactive oxygen species. Free Radical Biology and Medicine, 2009, 47, 333-343.	2.9	904
2	Mitochondrial permeability transition and oxidative stress. FEBS Letters, 2001, 495, 12-15.	2.8	722
3	Mitochondrial damage induced by conditions of oxidative stress. Free Radical Biology and Medicine, 1999, 26, 463-471.	2.9	720
4	Tissue-, substrate-, and site-specific characteristics of mitochondrial reactive oxygen species generation. Free Radical Biology and Medicine, 2009, 46, 1283-1297.	2.9	369
5	Mitochondria as a Source of Reactive Oxygen and Nitrogen Species: From Molecular Mechanisms to Human Health. Antioxidants and Redox Signaling, 2013, 18, 2029-2074.	5.4	344
6	Bioenergetic consequences of opening the ATP-sensitive K⁺channel of heart mitochondria. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 280, H649-H657.	3.2	305
7	Mild mitochondrial uncoupling in mice affects energy metabolism, redox balance and longevity. Aging Cell, 2008, 7, 552-560.	6.7	285
8	Higher Respiratory Activity Decreases Mitochondrial Reactive Oxygen Release and Increases Life Span in Saccharomyces cerevisiae. Journal of Biological Chemistry, 2004, 279, 49883-49888.	3.4	283
9	Soluble Uric Acid Activates the NLRP3 Inflammasome. Scientific Reports, 2017, 7, 39884.	3.3	259
10	Identification and Properties of a Novel Intracellular (Mitochondrial) ATP-sensitive Potassium Channel in Brain. Journal of Biological Chemistry, 2001, 276, 33369-33374.	3.4	257
11	Permeabilization of the inner mitochondrial membrane by Ca2+ ions is stimulated by t-butyl hydroperoxide and mediated by reactive oxygen species generated by mitochondria. Free Radical Biology and Medicine, 1995, 18, 479-486.	2.9	218
12	Mechanisms by which opening the mitochondrial ATP- sensitive K⁺channel protects the ischemic heart. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 283, H284-H295.	3.2	192
13	Effect of Inorganic Phosphate Concentration on the Nature of Inner Mitochondrial Membrane Alterations Mediated by Ca2+ Ions. Journal of Biological Chemistry, 1996, 271, 2929-2934.	3.4	169
14	Murine Mesenchymal Stem Cell Commitment to Differentiation Is Regulated by Mitochondrial Dynamics. Stem Cells, 2016, 34, 743-755.	3.2	164
15	Binding, Aggregation and Photochemical Properties of Methylene Blue in Mitochondrial Suspensions. Photochemistry and Photobiology, 2004, 79, 227.	2.5	163
16	Activation of the potato plant uncoupling mitochondrial protein inhibits reactive oxygen species generation by the respiratory chain. FEBS Letters, 1998, 425, 213-216.	2.8	147
17	Protection Against Ischemic Brain Injury by Inhibition of Mitochondrial Oxidative Stress. Journal of Bioenergetics and Biomembranes, 2004, 36, 347-352.	2.3	137
18	Binding, aggregation and photochemical properties of methylene blue in mitochondrial suspensions. Photochemistry and Photobiology, 2004, 79, 227-232.	2.5	128

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19	Effects of high fat diets on rodent liver bioenergetics and oxidative imbalance. Redox Biology, 2016, 8, 216-225.	9.0	127
20	Mitochondrial ATP-sensitive K+channel opening decreases reactive oxygen species generation. FEBS Letters, 2003, 536, 51-55.	2.8	123
21	Effect of Bcl-2 Overexpression on Mitochondrial Structure and Function. Journal of Biological Chemistry, 2002, 277, 42802-42807.	3.4	122
22	Mitochondrial Retrograde Signaling: Triggers, Pathways, and Outcomes. Oxidative Medicine and Cellular Longevity, 2015, 2015, 1-10.	4.0	121
23	Cross-Talk Between Mitochondria and NADPH Oxidase: Effects of Mild Mitochondrial Dysfunction on Angiotensin II-Mediated Increase in Nox Isoform Expression and Activity in Vascular Smooth Muscle Cells. Antioxidants and Redox Signaling, 2009, 11, 1265-1278.	5.4	120
24	Dihydrolipoyl dehydrogenase as a source of reactive oxygen species inhibited by caloric restriction and involved in Saccharomyces cerevisiae aging. FASEB Journal, 2007, 21, 274-283.	0.5	116
25	Exercise reestablishes autophagic flux and mitochondrial quality control in heart failure. Autophagy, 2017, 13, 1304-1317.	9.1	110
26	Mitochondrial ATP-sensitive K+ channels are redox-sensitive pathways that control reactive oxygen species production. Free Radical Biology and Medicine, 2007, 42, 1039-1048.	2.9	106
27	Mitochondrial calcium transport and the redox nature of the calcium-induced membrane permeability transition. Free Radical Biology and Medicine, 2018, 129, 1-24.	2.9	90
28	Mitochondrial morphology regulates organellar Ca²⁺ uptake and changes cellular Ca²⁺ homeostasis. FASEB Journal, 2019, 33, 13176-13188.	0.5	90
29	Tissue protection mediated by mitochondrial K+ channels. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2006, 1762, 202-212.	3.8	87
30	Redox regulation of the mitochondrial KATP channel in cardioprotection. Biochimica Et Biophysica Acta - Molecular Cell Research, 2011, 1813, 1309-1315.	4.1	87
31	Cell culture models of fatty acid overload: Problems and solutions. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2018, 1863, 143-151.	2.4	87
32	Mitochondrial ATP-Sensitive K+ Channels Prevent Oxidative Stress, Permeability Transition and Cell Death. Journal of Bioenergetics and Biomembranes, 2005, 37, 75-82.	2.3	86
33	Redox Mechanisms of Cytoprotection by Bcl-2. Antioxidants and Redox Signaling, 2005, 7, 508-514.	5.4	82
34	Mitochondrial permeability transition in neuronal damage promoted by Ca2+ and respiratory chain complex II inhibition. Journal of Neurochemistry, 2004, 90, 1025-1035.	3.9	79
35	Bcl-2 family proteins regulate mitochondrial reactive oxygen production and protect against oxidative stress. Free Radical Biology and Medicine, 2004, 37, 1845-1853.	2.9	77
36	Caloric restriction increases brain mitochondrial calcium retention capacity and protects against excitotoxicity. Aging Cell, 2017, 16, 73-81.	6.7	75

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37	Mild Mitochondrial Uncoupling and Calorie Restriction Increase Fasting eNOS, Akt and Mitochondrial Biogenesis. PLoS ONE, 2011, 6, e18433.	2.5	71
38	Mild Mitochondrial Uncoupling as a Therapeutic Strategy. Current Drug Targets, 2011, 12, 783-789.	2.1	71
39	Mitochondrial compartmentalization of redox processes. Free Radical Biology and Medicine, 2012, 52, 2201-2208.	2.9	69
40	Mitochondrial Ca^{2+} transport, permeability transition and oxidative stress in cell death: implications in cardiotoxicity, neurodegeneration and dyslipidemias. Frontiers in Bioscience - Landmark, 2006, 11, 2554.	3.0	66
41	Inhibition of specific electron transport pathways leads to oxidative stress and decreased Candida albicans proliferation. Journal of Bioenergetics and Biomembranes, 2006, 38, 129-135.	2.3	65
42	Ischemic preconditioning inhibits mitochondrial respiration, increases H_2O_2 release, and enhances K^+ transport. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 285, H154-H162.	3.2	64
43	Exercise Training Restores Cardiac Protein Quality Control in Heart Failure. PLoS ONE, 2012, 7, e52764.	2.5	64
44	Mitochondrial energy metabolism in neurodegeneration associated with methylmalonic acidemia. Journal of Bioenergetics and Biomembranes, 2011, 43, 39-46.	2.3	62
45	ATP-sensitive K⁺channels in renal mitochondria. American Journal of Physiology - Renal Physiology, 2003, 285, F1291-F1296.	2.7	61
46	Ischemic preconditioning requires increases in reactive oxygen release independent of mitochondrial K^+ channel activity. Free Radical Biology and Medicine, 2006, 40, 469-479.	2.9	61
47	Catalases and thioredoxin peroxidase protectSaccharomyces cerevisiaeagainst Ca^{2+}-induced mitochondrial membrane permeabilization and cell death. FEBS Letters, 2000, 473, 177-182.	2.8	60
48	Diet-Sensitive Sources of Reactive Oxygen Species in Liver Mitochondria: Role of Very Long Chain Acyl-CoA Dehydrogenases. PLoS ONE, 2013, 8, e77088.	2.5	60
49	Neurological disorders and mitochondria. Molecular Aspects of Medicine, 2020, 71, 100826.	6.4	60
50	H_2O_2 generation in Saccharomyces cerevisiae respiratory pet mutants: effect of cytochrome c. Free Radical Biology and Medicine, 2003, 35, 179-188.	2.9	57
51	Long-term intermittent feeding, but not caloric restriction, leads to redox imbalance, insulin receptor nitration, and glucose intolerance. Free Radical Biology and Medicine, 2011, 51, 1454-1460.	2.9	57
52	Intermittent Fasting Results in Tissue-Specific Changes in Bioenergetics and Redox State. PLoS ONE, 2015, 10, e0120413.	2.5	57
53	Commonly adopted caloric restriction protocols often involve malnutrition. Ageing Research Reviews, 2010, 9, 424-430.	10.9	56
54	Calorie restriction increases cerebral mitochondrial respiratory capacity in a NOâ€¢-mediated mechanism: Impact on neuronal survival. Free Radical Biology and Medicine, 2012, 52, 1236-1241.	2.9	54

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55	Pharmacological and physiological stimuli do not promote Ca2+-sensitive K+channel activity in isolated heart mitochondria. Cardiovascular Research, 2007, 73, 720-728.	3.8	49
56	Increased aerobic metabolism is essential for the beneficial effects of caloric restriction on yeast life span. Journal of Bioenergetics and Biomembranes, 2008, 40, 381-8.	2.3	49
57	Redox properties of the adenoside triphosphateâ€sensitive K⁺ channel in brain mitochondria. Journal of Neuroscience Research, 2008, 86, 1548-1556.	2.9	48
58	Caloric Restriction Promotes Structural and Metabolic Changes in the Skin. Cell Reports, 2017, 20, 2678-2692.	6.4	48
59	Mitochondrial ion transport pathways: Role in metabolic diseases. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 832-838.	1.0	46
60	Cardiolipin is a key determinant for mtDNA stability and segregation during mitochondrial stress. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 587-598.	1.0	46
61	H2O2 release from the very long chain acyl-CoA dehydrogenase. Redox Biology, 2015, 4, 375-380.	9.0	46
62	Dietary restriction in cerebral bioenergetics and redox state. Redox Biology, 2014, 2, 296-304.	9.0	41
63	Yeast as a model to study mitochondrial mechanisms in ageing. Mechanisms of Ageing and Development, 2010, 131, 494-502.	4.6	40
64	Strategies to detect mitochondrial oxidants. Redox Biology, 2019, 21, 101065.	9.0	40
65	Opening of mitochondrial K+ channels increases ischemic ATP levels by preventing hydrolysis. Journal of Bioenergetics and Biomembranes, 2002, 34, 285-298.	2.3	36
66	Aging and calorie restriction modulate yeast redox state, oxidized protein removal, and the ubiquitinâ€“proteasome system. Free Radical Biology and Medicine, 2011, 51, 664-670.	2.9	36
67	Hyperlipidemic Mice Present Enhanced Catabolism and Higher Mitochondrial ATP-Sensitive K+ Channel Activity. Gastroenterology, 2006, 131, 1228-1234.	1.3	35
68	Mitochondrial ATP-sensitive K+ channels as redox signals to liver mitochondria in response to hypertriglyceridemia. Free Radical Biology and Medicine, 2009, 47, 1432-1439.	2.9	35
69	Caloric restriction protects livers from ischemia/reperfusion damage by preventing Ca2+-induced mitochondrial permeability transition. Free Radical Biology and Medicine, 2017, 110, 219-227.	2.9	35
70	[25] Thiol enzymes protecting mitochondria against oxidative damage. Methods in Enzymology, 2002, 348, 260-270.	1.0	34
71	Phosphate Increases Mitochondrial Reactive Oxygen Species Release. Free Radical Research, 2004, 38, 1113-1118.	3.3	34
72	Glutathione and thioredoxin peroxidases mediate susceptibility of yeast mitochondria to Ca2+-induced damage. Archives of Biochemistry and Biophysics, 2004, 425, 14-24.	3.0	34

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73	A Highly Active ATP-Insensitive K+Import Pathway in Plant Mitochondria. Journal of Bioenergetics and Biomembranes, 2004, 36, 195-202.	2.3	33
74	Satellite cell selfâ€renewal in endurance exercise is mediated by inhibition of mitochondrial oxygen consumption. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 1661-1676.	7.3	31
75	Caloric restriction and redox state: Does this diet increase or decrease oxidant production?. Redox Report, 2011, 16, 237-241.	4.5	30
76	Mitochondrial form, function and signalling in aging. Biochemical Journal, 2016, 473, 3421-3449.	3.7	30
77	Plan S: Unrealistic capped fee structure. Science, 2019, 363, 461-461.	12.6	30
78	Distinct metabolic patterns during microglial remodeling by oleate and palmitate. Bioscience Reports, 2019, 39, .	2.4	30
79	RTG1- and RTG2-dependent retrograde signaling controls mitochondrial activity and stress resistance in Saccharomyces cerevisiae. Free Radical Biology and Medicine, 2015, 81, 30-37.	2.9	27
80	Diazoxide protects against methylmalonate-induced neuronal toxicity. Experimental Neurology, 2006, 201, 165-171.	4.1	25
81	Calorie Restriction Hysteretically Primes Aging Saccharomyces cerevisiae toward More Effective Oxidative Metabolism. PLoS ONE, 2013, 8, e56388.	2.5	25
82	Phosphatidylglycerol-derived phospholipids have a universal, domain-crossing role in stress responses. Archives of Biochemistry and Biophysics, 2015, 585, 90-97.	3.0	25
83	Diluted serum from calorieâ€restricted animals promotes mitochondrial Î²â€cell adaptations and protect against glucolipotoxicity. FEBS Journal, 2016, 283, 822-833.	4.7	25
84	Nicorandil protects cardiac mitochondria against permeability transition induced by ischemia-reperfusion. Journal of Bioenergetics and Biomembranes, 2008, 40, 95-102.	2.3	24
85	Effects of a high fat diet on liver mitochondria: increased ATP-sensitive K+ channel activity and reactive oxygen species generation. Journal of Bioenergetics and Biomembranes, 2010, 42, 245-253.	2.3	24
86	Mitochondrial Energy Metabolism and Redox State in Dyslipidemias. IUBMB Life, 2007, 59, 263-268.	3.4	22
87	Bicarbonate Increases Ischemia-Reperfusion Damage by Inhibiting Mitophagy. PLoS ONE, 2016, 11, e0167678.	2.5	22
88	<i>nde1</i> deletion improves mitochondrial DNA maintenance in <i>Saccharomyces cerevisiae</i> coenzyme Q mutants. Biochemical Journal, 2013, 449, 595-603.	3.7	21
89	Calorie restriction promotes cardiolipin biosynthesis and distribution between mitochondrial membranes. Mechanisms of Ageing and Development, 2017, 162, 9-17.	4.6	21
90	Diazoxide prevents reactive oxygen species and mitochondrial damage, leading to anti-hypertrophic effects. Chemico-Biological Interactions, 2017, 261, 50-55.	4.0	20

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91	<i>Saccharomycesâ€ƒcerevisiae coq10</i> null mutants are responsive to antimycin A. FEBS Journal, 2010, 277, 4530-4538.	4.7	19
92	Single Cell Oxygen Mapping (SCOM) by Scanning Electrochemical Microscopy Uncovers Heterogeneous Intracellular Oxygen Consumption. Scientific Reports, 2017, 7, 11428.	3.3	19
93	Functional changes induced by caloric restriction in cardiac and skeletal muscle mitochondria. Journal of Bioenergetics and Biomembranes, 2020, 52, 269-277.	2.3	18
94	Fasting promotes functional changes in liver mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 129-135.	1.0	17
95	A new target for an old DUB: UCH-L1 regulates mitofusin-2 levels, altering mitochondrial morphology, function and calcium uptake. Redox Biology, 2020, 37, 101676.	9.0	17
96	Serum from Calorie-Restricted Rats Activates Vascular Cell eNOS through Enhanced Insulin Signaling Mediated by Adiponectin. PLoS ONE, 2012, 7, e31155.	2.5	17
97	Bicarbonate modulates oxidative and functional damage in ischemiaâ€“reperfusion. Free Radical Biology and Medicine, 2013, 55, 46-53.	2.9	16
98	Increased glycolysis is an early consequence of palmitate lipotoxicity mediated by redox signaling. Redox Biology, 2021, 45, 102026.	9.0	15
99	Ischemic preconditioning enhances fatty acid-dependent mitochondrial uncoupling. Journal of Bioenergetics and Biomembranes, 2007, 39, 313-320.	2.3	14
100	Neuronal differentiation involves a shift from glucose oxidation to fermentation. Journal of Bioenergetics and Biomembranes, 2011, 43, 531-539.	2.3	14
101	Mitochondrial metabolism in aging: Effect of dietary interventions. Ageing Research Reviews, 2013, 12, 22-28.	10.9	14
102	Mitochondrial K+ Transport: Modulation and Functional Consequences. Molecules, 2021, 26, 2935.	3.8	14
103	Mitochondrial K+ transport and cardiac protection during ischemia/reperfusion. Brazilian Journal of Medical and Biological Research, 2005, 38, 345-352.	1.5	12
104	trans,trans-2,4-decadienal induces mitochondrial dysfunction and oxidative stress. Journal of Bioenergetics and Biomembranes, 2008, 40, 103-109.	2.3	10
105	Potent Cardioprotective Effect of the 4-Anilinoquinazoline Derivative PD153035: Involvement of Mitochondrial KATP Channel Activation. PLoS ONE, 2010, 5, e10666.	2.5	10
106	Respiratory and TCA cycle activities affect S. cerevisiae lifespan, response to caloric restriction and mtDNA stability. Journal of Bioenergetics and Biomembranes, 2011, 43, 483-491.	2.3	10
107	Diazoxide Modulates Cardiac Hypertrophy by Targeting H2O2 Generation and Mitochondrial Superoxide Dismutase Activity. Current Molecular Pharmacology, 2020, 13, 76-83.	1.5	10
108	Calorie restriction changes muscle satellite cell proliferation in a manner independent of metabolic modulation. Mechanisms of Ageing and Development, 2020, 192, 111362.	4.6	9

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109	Changes in mitochondrial morphology modulate LPS-induced loss of calcium homeostasis in BV-2 microglial cells. Journal of Bioenergetics and Biomembranes, 2021, 53, 109-118.	2.3	8
110	Cold Exposure and the Metabolism of Mice, Men, and Other Wonderful Creatures. Physiology, 2022, 37, 253-259.	3.1	8
111	Deletion of the transcriptional regulator opi1p decreases cardiolipin content and disrupts mitochondrial metabolism in Saccharomyces cerevisiae. Fungal Genetics and Biology, 2013, 60, 150-158.	2.1	7
112	Bioenergetic profiling in the skin. Experimental Dermatology, 2016, 25, 147-148.	2.9	7
113	Unveiling the contribution of the reproductive system of individual Caenorhabditis elegans on oxygen consumption by single-point scanning electrochemical microscopy measurements. Analytica Chimica Acta, 2021, 1146, 88-97.	5.4	7
114	Responsible Science Assessment: downplaying indexes, boosting quality. Anais Da Academia Brasileira De Ciencias, 2021, 93, e20191513.	0.8	6
115	An active-learning methodology for teaching oxidative phosphorylation. Medical Education, 2017, 51, 1169-1170.	2.1	5
116	Mice born to females with oocyte-specific deletion of mitofusin 2 have increased weight gain and impaired glucose homeostasis. Molecular Human Reproduction, 2020, 26, 938-952.	2.8	5
117	<scp>MS</scp>â€Driven Metabolic Alterations Are Recapitulated in <scp>iPSC</scp>â€Derived Astrocytes. Annals of Neurology, 2022, 91, 652-669.	5.3	5
118	Regulation of kidney mitochondrial function by caloric restriction. American Journal of Physiology - Renal Physiology, 2022, 323, F92-F106.	2.7	4
119	Mitochondria: New developments in pathophysiology. Molecular Aspects of Medicine, 2020, 71, 100841.	6.4	3
120	An Anoxia-starvation Model for Ischemia/Reperfusion in C. elegans. Journal of Visualized Experiments, 2014, , .	0.3	2
121	Intermittent Fasting Effects on the Central Nervous System: How Hunger Modulates Brain Function. , 2017, , 1-18.		1
122	Dietary restriction in cerebral bioenergetics and redox state. , 2014, 2, 296-296.		1
123	Where do we aspire to publish? A position paper on scientific communication in biochemistry and molecular biology. Brazilian Journal of Medical and Biological Research, 2019, 52, e8935.	1.5	1
124	Mitochondrial Reactive Oxygen Species in Myocardial Pre- and Postconditioning. , 2010, , 109-123.		0
125	Intermittent Fasting Effects on the Central Nervous System: How Hunger Modulates Brain Function. , 2019, , 1243-1260.		0
126	Disruption of polycystin-1 cleavage leads to cardiac metabolic rewiring in mice. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2022, 1868, 166371.	3.8	0