

Jason R Treberg

List of Publications by Year in descending order

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68
papers

3,457
citations

218592

26
h-index

143943

57
g-index

73
all docs

73
docs citations

73
times ranked

5117
citing authors

#	ARTICLE	IF	CITATIONS
1	Mitochondrial proton and electron leaks. <i>Essays in Biochemistry</i> , 2010, 47, 53-67.	2.1	601
2	Mitochondrial Complex II Can Generate Reactive Oxygen Species at High Rates in Both the Forward and Reverse Reactions. <i>Journal of Biological Chemistry</i> , 2012, 287, 27255-27264.	1.6	540
3	A radical shift in perspective: mitochondria as regulators of reactive oxygen species. <i>Journal of Experimental Biology</i> , 2017, 220, 1170-1180.	0.8	171
4	Evidence for Two Sites of Superoxide Production by Mitochondrial NADH-Ubiquinone Oxidoreductase (Complex I). <i>Journal of Biological Chemistry</i> , 2011, 286, 27103-27110.	1.6	168
5	The Mechanism of Superoxide Production by the Antimycin-inhibited Mitochondrial Q-cycle. <i>Journal of Biological Chemistry</i> , 2011, 286, 31361-31372.	1.6	158
6	Native rates of superoxide production from multiple sites in isolated mitochondria measured using endogenous reporters. <i>Free Radical Biology and Medicine</i> , 2012, 53, 1807-1817.	1.3	133
7	Protein S-glutathionylation links energy metabolism to redox signaling in mitochondria. <i>Redox Biology</i> , 2016, 8, 110-118.	3.9	107
8	The unusual energy metabolism of elasmobranch fishes. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2010, 155, 417-434.	0.8	91
9	Hydrogen peroxide efflux from muscle mitochondria underestimates matrix superoxide production â€” a correction using glutathione depletion. <i>FEBS Journal</i> , 2010, 277, 2766-2778.	2.2	78
10	Mitochondrial reactive oxygen species production by fish muscle mitochondria: Potential role in acute heat-induced oxidative stress. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2016, 191, 99-107.	0.7	78
11	Estimates of metabolic rate and major constituents of metabolic demand in fishes under field conditions: Methods, proxies, and new perspectives. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2016, 202, 10-22.	0.8	70
12	The accumulation of methylamine counteracting solutes in elasmobranchs with differing levels of urea: a comparison of marine and freshwater species. <i>Journal of Experimental Biology</i> , 2006, 209, 860-870.	0.8	67
13	The exceptional longevity of the naked mole-rat may be explained by mitochondrial antioxidant defenses. <i>Aging Cell</i> , 2019, 18, e12916.	3.0	67
14	Systemic activation of glutamate dehydrogenase increases renal ammoniogenesis: implications for the hyperinsulinism/hyperammonemia syndrome. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2010, 298, E1219-E1225.	1.8	61
15	The thioredoxin and glutathione-dependent H ₂ O ₂ consumption pathways in muscle mitochondria: Involvement in H ₂ O ₂ metabolism and consequence to H ₂ O ₂ efflux assays. <i>Free Radical Biology and Medicine</i> , 2016, 96, 334-346.	1.3	60
16	Elevated levels of trimethylamine oxide in deep-sea fish: evidence for synthesis and intertissue physiological importance. <i>The Journal of Experimental Zoology</i> , 2002, 293, 39-45.	1.4	49
17	Ammonia excretion in <i>Caenorhabditis elegans</i> : mechanism and evidence of ammonia transport of the Rhesus protein CeRhr-1. <i>Journal of Experimental Biology</i> , 2015, 218, 675-683.	0.8	43
18	The Mitochondrial Contribution to Animal Performance, Adaptation, and Life-History Variation. <i>Integrative and Comparative Biology</i> , 2018, 58, 480-485.	0.9	39

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19	Acid–base regulation in the Dungeness crab (<i>Metacarcinus magister</i>). <i>Marine Biology</i> , 2014, 161, 1179-1193.	0.7	38
20	A Model of the Proton Translocation Mechanism of Complex I. <i>Journal of Biological Chemistry</i> , 2011, 286, 17579-17584.	1.6	37
21	Does the physiology of chondrichthyan fishes constrain their distribution in the deep sea?. <i>Journal of Experimental Biology</i> , 2016, 219, 615-625.	0.8	37
22	On the reversibility of glutamate dehydrogenase and the source of hyperammonemia in the hyperinsulinism/hyperammonemia syndrome. <i>Advances in Enzyme Regulation</i> , 2010, 50, 34-43.	2.9	36
23	Differentiating between apparent and actual rates of H ₂ O ₂ metabolism by isolated rat muscle mitochondria to test a simple model of mitochondria as regulators of H ₂ O ₂ concentration. <i>Redox Biology</i> , 2015, 5, 216-224.	3.9	36
24	The freeze-avoidance response of smelt <i>Osmerus mordax</i> . <i>Journal of Experimental Biology</i> , 2002, 205, 1419-1427.	0.8	35
25	Muscle enzyme activities in a deep-sea squaloid shark, <i>Centroscyllium fabricii</i> , compared with its shallow-living relative, <i>Squalus acanthias</i> . <i>The Journal of Experimental Zoology</i> , 2003, 300A, 133-139.	1.4	30
26	Intracellular Glucose and Binding of Hexokinase and Phosphofructokinase to Particulate Fractions Increase under Hypoxia in Heart of the Amazonian Armored Catfish (<i>Liposarcus pardalis</i>). <i>Physiological and Biochemical Zoology</i> , 2007, 80, 542-550.	0.6	30
27	The freeze-avoidance response of smelt <i>Osmerus mordax</i> : initiation and subsequent suppression of glycerol, trimethylamine oxide and urea accumulation. <i>Journal of Experimental Biology</i> , 2002, 205, 1419-27.	0.8	26
28	Fluid Regulation and Physiological Adjustments in the Winter Skate, <i>Leucoraja ocellata</i> , Following Exposure to Reduced Environmental Salinities. <i>Environmental Biology of Fishes</i> , 2003, 66, 339-348.	0.4	25
29	Mitochondrial Sirtuin-3 (SIRT3) Prevents Doxorubicin-Induced Dilated Cardiomyopathy by Modulating Protein Acetylation and Oxidative Stress. <i>Circulation: Heart Failure</i> , 2022, 15, 101161CIRCHEARTFAILURE121008547.	1.6	25
30	The pH sensitivity of H ₂ O ₂ metabolism in skeletal muscle mitochondria. <i>FEBS Letters</i> , 2013, 587, 1799-1804.	1.3	24
31	Cutaneous nitrogen excretion in the African clawed frog <i>Xenopus laevis</i> : Effects of high environmental ammonia (HEA). <i>Aquatic Toxicology</i> , 2013, 136-137, 1-12.	1.9	24
32	Methionine restriction leads to hyperhomocysteinemia and alters hepatic H ₂ S production capacity in Fischer-344 rats. <i>Mechanisms of Ageing and Development</i> , 2018, 176, 9-18.	2.2	22
33	Mechanism of ammonia excretion in the freshwater leech <i>Nepheleopsis obscura</i> : characterization of a primitive Rh protein and effects of high environmental ammonia. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2015, 309, R692-R705.	0.9	21
34	Comparison of Mitochondrial Reactive Oxygen Species Production of Ectothermic and Endothermic Fish Muscle. <i>Frontiers in Physiology</i> , 2017, 8, 704.	1.3	21
35	The physiological stress response of the Atlantic stingray (<i>Hypanus sabinus</i>) to aerial exposure. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2018, 219-220, 38-43.	0.8	21
36	Multidimensional mitochondrial energetics: Application to the study of electron leak and hydrogen peroxide metabolism. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2018, 224, 121-128.	0.7	20

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37	The accumulation and synthesis of betaine in winter skate (<i>Leucoraja ocellata</i>). <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2007, 147, 475-483.	0.8	18
38	Osmolyte Adjustments as a Pressure Adaptation in Deep-Sea Chondrichthyan Fishes: An Intraspecific Test in Arctic Skates (<i>Amblyraja hyperborea</i>) along a Depth Gradient. <i>Physiological and Biochemical Zoology</i> , 2018, 91, 788-796.	0.6	18
39	Impact of climate change on the American lobster (<i>Homarus americanus</i>): Physiological responses to combined exposure of elevated temperature and pCO ₂ . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2019, 235, 202-210.	0.8	18
40	Mitochondria can act as energy-sensing regulators of hydrogen peroxide availability. <i>Redox Biology</i> , 2019, 20, 483-488.	3.9	18
41	Maintenance and accumulation of trimethylamine oxide by winter skate (<i>Leucoraja ocellata</i>): reliance on low whole animal losses rather than synthesis. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2006, 291, R1790-R1798.	0.9	17
42	Effects of temperature, dissolved oxygen, and substrate on the development of metabolic phenotypes in age-0 lake sturgeon (<i>Acipenser fulvescens</i>): implications for overwintering survival. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2019, 76, 1596-1607.	0.7	17
43	Temperature effects on trimethylamine oxide accumulation and the relationship between plasma concentration and tissue levels in smelt (<i>Osmerus mordax</i>). <i>Journal of Experimental Zoology Part A, Comparative Experimental Biology</i> , 2005, 303A, 283-293.	1.3	16
44	Ammonia excretion in <i>Caenorhabditis elegans</i> : Physiological and molecular characterization of the rhr-2 knock-out mutant. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2016, 195, 46-54.	0.8	16
45	Life through a wider scope: Brook Trout (<i>Salvelinus fontinalis</i>) exhibit similar aerobic scope across a broad temperature range. <i>Journal of Thermal Biology</i> , 2021, 99, 102929.	1.1	16
46	Vanadium accumulation in ascidian coelomic cells is associated with enhanced pentose phosphate pathway capacity but not overall aerobic or anaerobic metabolism. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2012, 161, 323-330.	0.7	15
47	The effect of short-term methionine restriction on glutathione synthetic capacity and antioxidant responses at the whole tissue and mitochondrial level in the rat liver. <i>Experimental Gerontology</i> , 2019, 127, 110712.	1.2	14
48	Intertissue Differences for the Role of Glutamate Dehydrogenase in Metabolism. <i>Neurochemical Research</i> , 2014, 39, 516-526.	1.6	13
49	Environment-phenotype interactions: Influences of brackish-water rearing on lake trout (<i>Salvelinus</i>) Tj ETQq1 1 0.784314 rgBT /Overlo 0.4 13	0.7	13
50	Ammonia excretion and acid-base regulation in the American horseshoe crab, <i>Limulus polyphemus</i> . <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	13
51	Genomic signals found using RNA sequencing show signatures of selection and subtle population differentiation in walleye (<i>Sander vitreus</i>) in a large freshwater ecosystem. <i>Ecology and Evolution</i> , 2020, 10, 7173-7188.	0.8	13
52	Mitochondrial KATP channels and sarcoplasmic reticulum influence cardiac force development under anoxia in the Amazonian armored catfish <i>Liposarcus pardalis</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2003, 134, 441-448.	0.8	12
53	Enhanced protein synthetic capacity in Atlantic cod (<i>Gadus morhua</i>) is associated with temperature-induced compensatory growth. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2005, 288, R205-R211.	0.9	12
54	Comparing Electron Leak in Vertebrate Muscle Mitochondria. <i>Integrative and Comparative Biology</i> , 2018, 58, 495-505.	0.9	11

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55	Activation of Liver Carnitine Palmitoyltransferase and Mitochondrial Acetoacetyl-CoA Thiolase Is Associated with Elevated Ketone Body Levels in the Elasmobranch <i>Squalus acanthias</i> . <i>Physiological and Biochemical Zoology</i> , 2006, 79, 899-908.	0.6	10
56	Mechanisms of Mitochondrial Free Radical Production and their Relationship to the Aging Process. , 2011, , 47-61.		10
57	A synthesis of senescence predictions for indeterminate growth, and support from multiple tests in wild lake trout. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, 20212146.	1.2	10
58	Getting the most out of reductionist approaches in comparative biochemistry and physiology. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2020, 250, 110483.	0.7	9
59	The simultaneous determination of NAD(H) and NADP(H) utilization by glutamate dehydrogenase. <i>Molecular and Cellular Biochemistry</i> , 2010, 344, 253-259.	1.4	7
60	Energy and corticosteroid mobilization following an induced stress response in an elasmobranch fish, the North Pacific spiny dogfish (<i>Squalus acanthias suckleyi</i>). <i>General and Comparative Endocrinology</i> , 2021, 310, 113799.	0.8	7
61	Applying a gene-suite approach to examine the physiological status of wild-caught walleye (<i>Sander</i>) Tj ETQq1 1 0.784314,rgBT /Over		
62	NADPH supply and the contribution of NAD(P)+ transhydrogenase (NNT) to H ₂ O ₂ balance in skeletal muscle mitochondria. <i>Archives of Biochemistry and Biophysics</i> , 2021, 707, 108934.	1.4	6
63	Review: Using isolated mitochondria to investigate mitochondrial hydrogen peroxide metabolism. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2021, 256, 110614.	0.7	6
64	A chromosomal inversion may facilitate adaptation despite periodic gene flow in a freshwater fish. <i>Ecology and Evolution</i> , 2022, 12, e8898.	0.8	6
65	Morphology and blood metabolites reflect recent spatial and temporal differences among Lake Winnipeg walleye, <i>Sander vitreus</i> . <i>Journal of Great Lakes Research</i> , 2021, 47, 603-613.	0.8	5
66	Increased reactive oxygen species production and maintenance of membrane potential in VDAC-less <i>Neurospora crassa</i> mitochondria. <i>Journal of Bioenergetics and Biomembranes</i> , 2019, 51, 341-354.	1.0	4
67	The effect of short-term methionine restriction on hydrogen peroxide metabolism in Fischer-344 rat skeletal muscle mitochondria. <i>Mitochondrion</i> , 2020, 55, 1-7.	1.6	3
68	There was more to osmolyte selection than just osmotic balance. <i>Journal of Experimental Biology</i> , 2015, 218, 3532-3533.	0.8	2