Anatoly A Starkov

List of Publications by Year
in descending order

119 papers	11,684 citations	38660 50 h-index	27345 106 g-index
123 all docs	123 docs citations	123 times ranked	14600 citing authors

#	Article	IF	Citations
1	High protonic potential actuates a mechanism of production of reactive oxygen species in mitochondria. FEBS Letters, 1997, 416, 15-18.	1.3	1,490
2	Mitochondrial metabolism of reactive oxygen species. Biochemistry (Moscow), 2005, 70, 200-214.	0.7	1,008
3	The Role of Mitochondria in Reactive Oxygen Species Metabolism and Signaling. Annals of the New York Academy of Sciences, 2008, 1147, 37-52.	1.8	653
4	Mitochondrial Â-Ketoglutarate Dehydrogenase Complex Generates Reactive Oxygen Species. Journal of Neuroscience, 2004, 24, 7779-7788.	1.7	626
5	Regulation of brain mitochondrial H₂O₂ production by membrane potential and NAD(P)H redox state. Journal of Neurochemistry, 2003, 86, 1101-1107.	2.1	447
6	Mitochondrial Targets of Drug Toxicity. Annual Review of Pharmacology and Toxicology, 2000, 40, 353-388.	4.2	405
7	Mitochondrial calcium and oxidative stress as mediators of ischemic brain injury. Cell Calcium, 2004, 36, 257-264.	1.1	298
8	Mitochondrial dysfunction in the limelight of Parkinson's disease pathogenesis. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2009, 1792, 651-663.	1.8	219
9	Mitochondrial Mechanisms of Neural Cell Death and Neuroprotective Interventions in Parkinson's Disease. Annals of the New York Academy of Sciences, 2003, 991, 111-119.	1.8	216
10	Regulation of hydrogen peroxide production by brain mitochondria by calcium and Bax. Journal of Neurochemistry, 2002, 83, 220-228.	2.1	215
11	Impaired PGC-1Î± function in muscle in Huntington's disease. Human Molecular Genetics, 2009, 18, 3048-3065.	1.4	215
12	Calcium and Mitochondrial Reactive Oxygen Species Generation: How to Read the Facts. Journal of Alzheimer's Disease, 2010, 20, S413-S426.	1.2	209
13	Neural mitochondrial Ca2+capacity impairment precedes the onset of motor symptoms in G93A Cu/Zn-superoxide dismutase mutant mice. Journal of Neurochemistry, 2006, 96, 1349-1361.	2.1	203
14	Cause and consequence: Mitochondrial dysfunction initiates and propagates neuronal dysfunction, neuronal death and behavioral abnormalities in age-associated neurodegenerative diseases. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2010, 1802, 122-134.	1.8	203
15	Mice lacking alpha-synuclein are resistant to mitochondrial toxins. Neurobiology of Disease, 2006, 21, 541-548.	2.1	185
16	Fatty acids as natural uncouplers preventing generation of Oâ‹…â¯2and H2O2by mitochondria in the resting state. FEBS Letters, 1998, 435, 215-218.	1.3	170
17	Distinct Nrf2 Signaling Mechanisms of Fumaric Acid Esters and Their Role in Neuroprotection against 1-Methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine-Induced Experimental Parkinson's-Like Disease. Journal of Neuroscience, 2016, 36, 6332-6351.	1.7	169
18	Structural Determinants of Fluorochemical-Induced Mitochondrial Dysfunction. Toxicological Sciences, 2002, 66, 244-252.	1.4	167

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19	Perfluoroalkyl acids-induced liver steatosis: Effects on genes controlling lipid homeostasis. Toxicology, 2017, 378, 37-52.	2.0	163
20	Inhibition of the alternative oxidase stimulates H2 O2 production in plant mitochondria. FEBS Letters, 1997, 415, 87-90.	1.3	156
21	Mitochondrial ROS metabolism: 10 Years later. Biochemistry (Moscow), 2015, 80, 517-531.	0.7	149
22	The Oxygen Free Radicals Originating from Mitochondrial Complex I Contribute to Oxidative Brain Injury Following Hypoxiaâ€“Ischemia in Neonatal Mice. Journal of Neuroscience, 2012, 32, 3235-3244.	1.7	145
23	The mitochondrial respiratory chain is a modulator of apoptosis. Journal of Cell Biology, 2007, 179, 1163-1177.	2.3	136
24	Myxothiazol Induces H2O2 Production from Mitochondrial Respiratory Chain. Biochemical and Biophysical Research Communications, 2001, 281, 645-650.	1.0	130
25	Inhibition of transglutaminase 2 mitigates transcriptional dysregulation in models of Huntington disease. EMBO Molecular Medicine, 2010, 2, 349-370.	3.3	124
26	Cyclosporin A-insensitive Permeability Transition in Brain Mitochondria. Journal of Biological Chemistry, 2003, 278, 27382-27389.	1.6	123
27	Methylene blue upregulates Nrf2/ARE genes and prevents tau-related neurotoxicity. Human Molecular Genetics, 2014, 23, 3716-3732.	1.4	115
28	â€œMildâ€•Uncoupling of Mitochondria. Bioscience Reports, 1997, 17, 273-279.	1.1	108
29	Behavioral deficit, oxidative stress, and mitochondrial dysfunction precede tau pathology in P301S transgenic mice. FASEB Journal, 2011, 25, 4063-4072.	0.2	106
30	Measurement of Mitochondrial ROS Production. Methods in Molecular Biology, 2010, 648, 245-255.	0.4	96
31	Mitochondrial Dysfunction Contributes to Alveolar Developmental Arrest in Hyperoxia-Exposed Mice. American Journal of Respiratory Cell and Molecular Biology, 2009, 40, 511-518.	1.4	94
32	Mice deficient in dihydrolipoamide dehydrogenase show increased vulnerability to MPTP, malonate and 3â€nitropropionic acid neurotoxicity. Journal of Neurochemistry, 2004, 88, 1352-1360.	2.1	92
33	The Role of Tetrahydrobiopterin in the Regulation of Neuronal Nitric-oxide Synthase-generated Superoxide. Journal of Biological Chemistry, 2002, 277, 40275-40280.	1.6	85
34	Hypoxic-Ischemic Injury in the Developing Brain: The Role of Reactive Oxygen Species Originating in Mitochondria. Neurology Research International, 2012, 2012, 1-10.	0.5	85
35	Complement Component C1q Mediates Mitochondria-Driven Oxidative Stress in Neonatal Hypoxicâ€“Ischemic Brain Injury. Journal of Neuroscience, 2010, 30, 2077-2087.	1.7	84
36	Oxidative Damage Compromises Energy Metabolism in the Axonal Degeneration Mouse Model of X-Adrenoleukodystrophy. Antioxidants and Redox Signaling, 2011, 15, 2095-2107.	2.5	78

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37	Bezafibrate administration improves behavioral deficits and tau pathology in P301S mice. Human Molecular Genetics, 2012, 21, 5091-5105.	1.4	77
38	Discovery of LRE1 as a specific and allosteric inhibitor of soluble adenylyl cyclase. Nature Chemical Biology, 2016, 12, 838-844.	3.9	74
39	Pioglitazone halts axonal degeneration in a mouse model of X-linked adrenoleukodystrophy. Brain, 2013, 136, 2432-2443.	3.7	69
40	The molecular identity of the mitochondrial Ca²⁺ sequestration system. FEBS Journal, 2010, 277, 3652-3663.	2.2	63
41	Measurements of the Antioxidant Enzyme Activities of Superoxide Dismutase, Catalase, and Glutathione Peroxidase. Methods in Cell Biology, 2007, 80, 379-393.	0.5	62
42	The mitochondrial calcium regulator cyclophilin D is an essential component of oestrogen-mediated neuroprotection in amyotrophic lateral sclerosis. Brain, 2012, 135, 2865-2874.	3.7	62
43	6-Ketocholestanol abolishes the effect of the most potent uncouplers of oxidative phosphorylation in mitochondria. FEBS Letters, 1994, 355, 305-308.	1.3	61
44	In VivoPathogenic Role of Mutant SOD1 Localized in the Mitochondrial Intermembrane Space. Journal of Neuroscience, 2011, 31, 15826-15837.	1.7	60
45	Scavenging of H2O2 by mouse brain mitochondria. Journal of Bioenergetics and Biomembranes, 2014, 46, 471-477.	1.0	60
46	Benfotiamine treatment activates the Nrf2/ARE pathway and is neuroprotective in a transgenic mouse model of tauopathy. Human Molecular Genetics, 2018, 27, 2874-2892.	1.4	58
47	The negative impact ofÎ±â€ketoglutarate dehydrogenase complex deficiency on matrix substrateâ€level phosphorylation. FASEB Journal, 2013, 27, 2392-2406.	0.2	57
48	Hypoxic Stress Exacerbates Hyperoxia-Induced Lung Injury in a Neonatal Mouse Model of Bronchopulmonary Dysplasia. Neonatology, 2009, 95, 299-305.	0.9	56
49	Neuroprotective mechanisms of creatine occur in the absence of mitochondrial creatine kinase. Neurobiology of Disease, 2004, 15, 610-617.	2.1	54
50	6-Ketocholestanol is a recoupler for mitochondria, chromatophores and cytochrome oxidase proteoliposomes. Biochimica Et Biophysica Acta - Bioenergetics, 1997, 1318, 159-172.	0.5	52
51	Autophagy Induction by Bexarotene Promotes Mitophagy in Presenilin 1 Familial Alzheimerâ€™s Disease iPSC-Derived Neural Stem Cells. Molecular Neurobiology, 2019, 56, 8220-8236.	1.9	52
52	Apoptosis-Related Activities Measured with Isolated Mitochondria and Digitonin-Permeabilized Cells. Methods in Enzymology, 2000, 322, 222-234.	0.4	51
53	Mitochondrial Permeability Transition Pore Component Cyclophilin D Distinguishes Nigrostriatal Dopaminergic Death Paradigms in the MPTP Mouse Model of Parkinson's Disease. Antioxidants and Redox Signaling, 2012, 16, 855-868.	2.5	49
54	An update on the role of mitochondrial Î±-ketoglutarate dehydrogenase in oxidative stress. Molecular and Cellular Neurosciences, 2013, 55, 13-16.	1.0	49

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55	Reverse electron transfer results in a loss of flavin from mitochondrial complex I: Potential mechanism for brain ischemia reperfusion injury. Journal of Cerebral Blood Flow and Metabolism, 2017, 37, 3649-3658.	2.4	48
56	Redox-Dependent Loss of Flavin by Mitochondrial Complex I in Brain Ischemia/Reperfusion Injury. Antioxidants and Redox Signaling, 2019, 31, 608-622.	2.5	48
57	Behavioral Improvement after Chronic Administration of Coenzyme Q10 in P301S Transgenic Mice. Journal of Alzheimer's Disease, 2012, 28, 173-182.	1.2	47
58	PGCâ€1Î±: overexpression exacerbates Î²â€amyloid and tau deposition in a transgenic mouse model of Alzheimer's disease. FASEB Journal, 2014, 28, 1745-1755.	0.2	47
59	Modulation of F₀F₁â€ATP synthase activity by cyclophilin D regulates matrix adenine nucleotide levels. FEBS Journal, 2011, 278, 1112-1125.	2.2	45
60	Crosstalk between the mTOR and Nrf2/ARE signaling pathways as a target in the improvement of long-term potentiation. Experimental Neurology, 2020, 328, 113285.	2.0	45
61	Regulation of intermediary metabolism by the PKCÎ´ signalosome in mitochondria. FASEB Journal, 2010, 24, 5033-5042.	0.2	44
62	Portal to Alzheimer's disease. Nature Medicine, 2008, 14, 1020-1021.	15.2	43
63	Impaired Brain Creatine Kinase Activity in Huntingtonâ€™s Disease. Neurodegenerative Diseases, 2011, 8, 194-201.	0.8	43
64	Uncoupling effect of fatty acids on heart muscle mitochondria and submitochondrial particles. FEBS Letters, 1991, 295, 51-54.	1.3	42
65	Isolation and Functional Assessment of Mitochondria from Small Amounts of Mouse Brain Tissue. Methods in Molecular Biology, 2011, 793, 311-324.	0.4	42
66	Mutant TDP-43 does not impair mitochondrial bioenergetics in vitro and in vivo. Molecular Neurodegeneration, 2017, 12, 37.	4.4	37
67	Estrogen receptor beta modulates permeability transition in brain mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 423-433.	0.5	37
68	Thyroxine induces cyclosporin A-insensitive, Ca2+-dependent reversible permeability transition pore in rat liver mitochondria. FEBS Letters, 1997, 412, 173-178.	1.3	35
69	Methylenedioxymethamphetamine inhibits mitochondrial complex I activity in mice: a possible mechanism underlying neurotoxicity. British Journal of Pharmacology, 2010, 160, 233-245.	2.7	35
70	Simplified qPCR method for detecting excessive mtDNA damage induced by exogenous factors. Toxicology, 2017, 382, 67-74.	2.0	35
71	Regulation of the energy coupling in mitochondria by some steroid and thyroid hormones. Biochimica Et Biophysica Acta - Bioenergetics, 1997, 1318, 173-183.	0.5	34
72	UCP2 overexpression worsens mitochondrial dysfunction and accelerates disease progression in a mouse model of amyotrophic lateral sclerosis. Molecular and Cellular Neurosciences, 2013, 57, 104-110.	1.0	34

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73	Mitochondrial diaphorases as NAD⁺donors to segments of the citric acid cycle that support substrateâ€level phosphorylation yielding ATP during respiratory inhibition. FASEB Journal, 2014, 28, 1682-1697.	0.2	33
74	Alterations in voltage-sensing of the mitochondrial permeability transition pore in ANT1-deficient cells. Scientific Reports, 2016, 6, 26700.	1.6	33
75	Truncated Peroxisome Proliferator-Activated Receptor-Î³ Coactivator 1Î± Splice Variant Is Severely Altered in Huntingtonâ€™s Disease. Neurodegenerative Diseases, 2011, 8, 496-503.	0.8	32
76	Mild metabolic perturbations alter succinylation of mitochondrial proteins. Journal of Neuroscience Research, 2017, 95, 2244-2252.	1.3	32
77	Krebs cycle metabolites and preferential succinate oxidation following neonatal hypoxic-ischemic brain injury in mice. Pediatric Research, 2018, 83, 491-497.	1.1	31
78	Prohibitin is a positive modulator of mitochondrial function in <scp>PC</scp>12 cells under oxidative stress. Journal of Neurochemistry, 2018, 146, 235-250.	2.1	31
79	Evaluation of the toxicity of fungicides to flight muscle mitochondria of bumblebee (Bombus) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.6	30
80	A kinetic assay of mitochondrial ADPâ€“ATP exchange rate in permeabilized cells. Analytical Biochemistry, 2010, 407, 52-57.	1.1	28
81	Distinct intracellular sAC-cAMP domains regulate ER calcium signaling and OXPHOS function. Journal of Cell Science, 2017, 130, 3713-3727.	1.2	28
82	Protein-mediated energy-dissipating pathways in mitochondria. Chemico-Biological Interactions, 2006, 163, 133-144.	1.7	27
83	p62-Nrf2-p62 Mitophagy Regulatory Loop as a Target for Preventive Therapy of Neurodegenerative Diseases. Brain Sciences, 2020, 10, 847.	1.1	27
84	Measurement of ADPâ€“ATP Exchange in Relation to Mitochondrial Transmembrane Potential and Oxygen Consumption. Methods in Enzymology, 2014, 542, 333-348.	0.4	26
85	An Isolation Method for Assessment of Brain Mitochondria Function in Neonatal Mice with Hypoxic-Ischemic Brain Injury. Developmental Neuroscience, 2008, 30, 319-324.	1.0	24
86	Mice deficient in dihydrolipoyl succinyl transferase show increased vulnerability to mitochondrial toxins. Neurobiology of Disease, 2009, 36, 320-330.	2.1	24
87	l-Arginine regulates neuronal nitric oxide synthase production of superoxide and hydrogen peroxide. Biochemical Pharmacology, 2005, 69, 971-979.	2.0	23
88	Methylene blue does not bypass Complex <scp>III</scp> antimycin block in mouse brain mitochondria. FEBS Letters, 2019, 593, 499-503.	1.3	22
89	Promethazine protects against 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine neurotoxicity. Neurobiology of Disease, 2005, 20, 701-708.	2.1	21
90	Methylene blue improves sensorimotor phenotype and decreases anxiety in parallel with activating brain mitochondria biogenesis in mid-age mice. Neuroscience Research, 2016, 113, 19-27.	1.0	21

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91	Cyclosporin A-sensitive decrease in the transmembrane potential across the inner membrane of liver mitochondria induced by low concentrations of fatty acids and Ca2+. Biochemistry (Moscow), 2003, 68, 391-398.	0.7	18
92	Mild Hypoxemia during Initial Reperfusion Alleviates the Severity of Secondary Energy Failure and Protects Brain in Neonatal Mice with Hypoxic-Ischemic Injury. Journal of Cerebral Blood Flow and Metabolism, 2012, 32, 232-241.	2.4	17
93	Antihelminthic Benzimidazoles Are Novel HIF Activators That Prevent Oxidative Neuronal Death via Binding to Tubulin. Antioxidants and Redox Signaling, 2015, 22, 121-134.	2.5	17
94	Effect of electron-transport inhibitors on the generation of reactive oxygen species by pea mitochondria during succinate oxidation. Biochemistry (Moscow), 2003, 68, 747-751.	0.7	13
95	Diacylglycerols Activate Mitochondrial Cationic Channel(s) and Release Sequestered Ca2+. Journal of Bioenergetics and Biomembranes, 2005, 37, 237-247.	1.0	13
96	Isolation and properties of flight muscle mitochondria of the bumblebee Bombus terrestris (L.). Biochemistry (Moscow), 2013, 78, 909-914.	0.7	13
97	HIF1Î± stabilization in hypoxia is not oxidant-initiated. ELife, 2021, 10, .	2.8	13
98	Metabolic ROS Signaling: To Immunity and Beyond. Biochemistry (Moscow), 2020, 85, 1650-1667.	0.7	13
99	Method for detection of mtDNA damages for evaluating of pesticides toxicity for bumblebees (Bombus) Tj ETQq1 1 0.784314 rgBT /Ov	1.6	12
100	Mitochondrial Dysfunction and Permeability Transition in Neonatal Brain and Lung Injuries. Cells, 2021, 10, 569.	1.8	12
101	Protein-mediated energy-dissipating pathways in mitochondria. Chemico-Biological Interactions, 2006, 161, 57-68.	1.7	11
102	Î²-Guanidinopropionic Acid Stimulates Brain Mitochondria Biogenesis and Alters Cognitive Behavior in Nondiseased Mid-Age Mice. Journal of Experimental Neuroscience, 2018, 12, 117906951876652.	2.3	10
103	Unique features of flight muscles mitochondria of honey bees (Apis mellifera L.). Archives of Insect Biochemistry and Physiology, 2019, 102, e21595.	0.6	10
104	Lung cancer increases H2O2 concentration in the exhaled breath condensate, extent of mtDNA damage, and mtDNA copy number in buccal mucosa. Heliyon, 2020, 6, e04303.	1.4	7
105	Promethazine protects against 3-nitropropionic acid-induced neurotoxicity. Neurochemistry International, 2010, 56, 208-212.	1.9	6
106	Divalent cation chelators citrate and EDTA unmask an intrinsic uncoupling pathway in isolated mitochondria. Journal of Bioenergetics and Biomembranes, 2017, 49, 3-11.	1.0	6
107	The protecting effect of L-carnitine on Ca2+-loaded rat liver mitochondria. FEBS Letters, 1991, 289, 187-189.	1.3	5
108	Ascorbate and low concentrations of FeSO4 induce Ca2+-dependent pore in rat liver mitochondria. Biochemistry (Moscow), 2001, 66, 909-912.	0.7	4

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109	Yin and Yang of Mitochondrial ROS. , 2006, , 1-60.		3
110	Production of reactive oxygen species by flight muscle mitochondria of the bumblebee (Bombus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	0.3	3
111	Mildronate protects heart mtDNA from oxidative stress toxicity induced by exhaustive physical exercise. Archives of Biochemistry and Biophysics, 2021, 705, 108892.	1.4	3
112	Measuring Mitochondrial Reactive Oxygen Species (ROS) Production. , 2014, , 265-278.		3
113	STUDY OF THE MICROBIOLOGICAL COMPOSITION OF DAIRY PRODUCTS AND MAYONNAISE USING DNA BARCODING AND METABARCODING. Foods and Raw Materials, 2018, 6, 144-153.	0.8	3
114	The effect of fenofibrate on expression of genes involved in fatty acids beta-oxidation and associated free-radical processes. Biochemistry (Moscow) Supplement Series B: Biomedical Chemistry, 2016, 10, 70-74.	0.2	1
115	Thyroxine reversibly inhibits the uncoupling action of protonophores on energy production in rat thymus lymphocytes. Biochemistry (Moscow), 2002, 67, 468-472.	0.7	0
116	Cyclophilin D decreases ATP hydrolysis and synthesis rates of the FOF1-ATP synthase, unaffecting ADPâ€“ATP flux rates in intact mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 138.	0.5	0
117	Nonalcoholic Fatty Liver Disease in Children (NAFLD): Does the Severity of Disease Correlate with Mitochondrial Respiratory Chain Enzyme Activity?.. , 2010, , P2-724-P2-724.		0
118	_-Ketoglutarate Dehydrogenase Complex in Neurodegeneration. Oxidative Stress and Disease, 2012, , 433-454.	0.3	0
119	INTEGRAL ANALYSIS OF GENOMIC AND TRANSCRIPTOMIC CHANGES IN CLEAR CELL RENAL CELL CARCINOMA IN THE RUSSIAN POPULATION. Siberian Journal of Oncology, 2020, 18, 39-49.	0.1	0