Boris V Chernyak

List of Publications by Year
in descending order

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117 papers	4,902 citations	101496 36 h-index	102432 66 g-index
119 all docs	119 docs citations	119 times ranked	7797 citing authors

#	Article	IF	Citations
1	Modulation of the Mitochondrial Permeability Transition Pore by Pyridine Nucleotides and Dithiol Oxidation at Two Separate Sites. Journal of Biological Chemistry, 1996, 271, 6746-6751.	1.6	474
2	An attempt to prevent senescence: A mitochondrial approach. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 437-461.	0.5	359
3	Mitochondria-targeted plastoquinone derivatives as tools to interrupt execution of the aging program. 1. Cationic plastoquinone derivatives: Synthesis and in vitro studies. Biochemistry (Moscow), 2008, 73, 1273-1287.	0.7	267
4	The Mitochondrial Permeability Transition Pore is Modulated by Oxidative Agents Through Both Pyridine Nucleotides and Glutathione at Two Separate Sites. FEBS Journal, 1996, 238, 623-630.	0.2	213
5	â€œWages of Fearâ€• transient threefold decrease in intracellular ATP level imposes apoptosis. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1658, 141-147.	0.5	149
6	Pyrimidine biosynthesis links mitochondrial respiration to the p53 pathway. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12828-12833.	3.3	148
7	Oligomycin, inhibitor of the F0 part of H+-ATP-synthase, suppresses the TNF-induced apoptosis. Oncogene, 2002, 21, 8149-8157.	2.6	146
8	Thread-grain transition of mitochondrial reticulum as a step of mitoptosis and apoptosis. Molecular and Cellular Biochemistry, 2004, 256, 341-358.	1.4	128
9	Production of reactive oxygen species in mitochondria of HeLa cells under oxidative stress. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 525-534.	0.5	112
10	Effect of oxidative stress on dynamics of mitochondrial reticulum. Biochimica Et Biophysica Acta - Bioenergetics, 2006, 1757, 518-524.	0.5	111
11	Prevention of cardiolipin oxidation and fatty acid cycling as two antioxidant mechanisms of cationic derivatives of plastoquinone (SkQs). Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 878-889.	0.5	104
12	Novel mechanism of elimination of malfunctioning mitochondria (mitoptosis): Formation of mitoptotic bodies and extrusion of mitochondrial material from the cell. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 817-825.	0.5	97
13	A novel type of energetics in a marine alkali-tolerant bacterium. FEBS Letters, 1983, 164, 38-42.	1.3	85
14	Selective inhibition of the mitochondrial permeability transition pore at the oxidation-reduction sensitive dithiol by monobromobimane. FEBS Letters, 1995, 362, 239-242.	1.3	85
15	Mitochondria-targeted plastoquinone derivatives as tools to interrupt execution of the aging program. 3. Inhibitory effect of SkQ1 on tumor development from p53-deficient cells. Biochemistry (Moscow), 2008, 73, 1300-1316.	0.7	82
16	Mitochondrial reactive oxygen species are involved in chemoattractant-induced oxidative burst and degranulation of human neutrophils in vitro. European Journal of Cell Biology, 2017, 96, 254-265.	1.6	80
17	Induction of autophagy by depolarization of mitochondria. Autophagy, 2018, 14, 921-924.	4.3	78
18	Protective Effects of Mitochondria-Targeted Antioxidant SkQ in Aqueous and Lipid Membrane Environments. Journal of Membrane Biology, 2008, 222, 141-149.	1.0	76

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19	The role of mitochondrial ROS in antibacterial immunity. Journal of Cellular Physiology, 2018, 233, 3745-3754.	2.0	74
20	Expression, purification, and characterization of human enteropeptidase catalytic subunit in Escherichia coli. Protein Expression and Purification, 2003, 31, 133-139.	0.6	71
21	Mitochondrial permeability transition pore is involved in oxidative burst and NETosis of human neutrophils. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2020, 1866, 165664.	1.8	70
22	Redox Regulation of the Mitochondrial Permeability Transition Pore. Bioscience Reports, 1997, 17, 293-302.	1.1	66
23	Role of mitochondrial reactive oxygen species in age-related inflammatory activation of endothelium. Aging, 2014, 6, 661-674.	1.4	65
24	HIV-1 Tat protein induces DNA damage in human peripheral blood B-lymphocytes via mitochondrial ROS production. Redox Biology, 2018, 15, 97-108.	3.9	62
25	In search of novel highly active mitochondriaâ€targeted antioxidants: Thymoquinone and its cationic derivatives. FEBS Letters, 2013, 587, 2018-2024.	1.3	57
26	6-Ketocholestanol is a recoupler for mitochondria, chromatophores and cytochrome oxidase proteoliposomes. Biochimica Et Biophysica Acta - Bioenergetics, 1997, 1318, 159-172.	0.5	52
27	Novel Mitochondria-Targeted Antioxidants: Plastoquinone Conjugated with Cationic Plant Alkaloids Berberine and Palmatine. Pharmaceutical Research, 2011, 28, 2883-2895.	1.7	49
28	A cytochrome c mutant with high electron transfer and antioxidant activities but devoid of apoptogenic effect. Biochemical Journal, 2002, 362, 749-754.	1.7	47
29	Long-distance apoptotic killing of cells is mediated by hydrogen peroxide in a mitochondrial ROS-dependent fashion. Cell Death and Differentiation, 2005, 12, 1442-1444.	5.0	47
30	Prolonged lipid oxidation after photodynamic treatment. Study with oxidation-sensitive probe C11-BODIPY581/591. FEBS Letters, 2005, 579, 1255-1260.	1.3	43
31	Generation of new TRAIL mutants DR5-A and DR5-B with improved selectivity to death receptor 5. Apoptosis: an International Journal on Programmed Cell Death, 2009, 14, 778-787.	2.2	41
32	Mitochondria as source of reactive oxygen species under oxidative stress. Study with novel mitochondria-targeted antioxidants â€" the â€œSkulachev-ionâ€•derivatives. Biochemistry (Moscow), 2010, 75, 123-129.	0.7	41
33	Mitochondria-Targeted Antioxidant SkQ1 Improves Dermal Wound Healing in Genetically Diabetic Mice. Oxidative Medicine and Cellular Longevity, 2017, 2017, 1-10.	1.9	41
34	Mitochondriaâ€targeted antioxidant SkQR1 selectively protects MDR (Pgp 170)â€negative cells against oxidative stress. FEBS Letters, 2010, 584, 562-566.	1.3	40
35	A cytochrome c mutant with high electron transfer and antioxidant activities but devoid of apoptogenic effect. Biochemical Journal, 2002, 362, 749.	1.7	39
36	Mitochondria-targeted antioxidant SkQ1 improves impaired dermal wound healing in old mice. Aging, 2015, 7, 475-485.	1.4	38

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37	Mitochondria-targeted Antioxidants as a Prospective Therapeutic Strategy for Multiple Sclerosis. Current Medicinal Chemistry, 2017, 24, 2086-2114.	1.2	37
38	Low concentration of uncouplers of oxidative phosphorylation decreases the TNF-induced endothelial permeability and lethality in mice. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2017, 1863, 968-977.	1.8	36
39	Comparative analysis of proapoptotic activity of cytochrome c mutants in living cells. Apoptosis: an International Journal on Programmed Cell Death, 2005, 10, 797-808.	2.2	34
40	A short-chain alkyl derivative of Rhodamine 19 acts as a mild uncoupler of mitochondria and a neuroprotector. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1739-1747.	0.5	34
41	Overexpression in Escherichia coli and purification of human fibroblast growth factor (FGF-2). Biochemistry (Moscow), 2009, 74, 221-225.	0.7	32
42	Biochemical characterization of human enteropeptidase light chain. Biochemistry (Moscow), 2006, 71, 113-119.	0.7	30
43	Scavenging of Reactive Oxygen Species in Mitochondria Induces Myofibroblast Differentiation. Antioxidants and Redox Signaling, 2010, 13, 1297-1307.	2.5	30
44	Novel mitochondria-targeted antioxidants, â€œSkulachev-Ionâ€•derivatives, accelerate dermal wound healing in animals. Biochemistry (Moscow), 2010, 75, 274-280.	0.7	29
45	Hydrogen peroxide produced inside mitochondria takes part in cell-to-cell transmission of apoptotic signal. Biochemistry (Moscow), 2006, 71, 60-67.	0.7	28
46	Prooxidant Properties of p66shc Are Mediated by Mitochondria in Human Cells. PLoS ONE, 2014, 9, e86521.	1.1	28
47	Regulation of H+-ATPases in oxidative- and photophosphorylation. Trends in Biochemical Sciences, 1986, 11, 32-35.	3.7	27
48	Mitochondria-targeted antioxidants prevent TNFÎ±-induced endothelial cell damage. Biochemistry (Moscow), 2014, 79, 124-130.	0.7	26
49	Reactive oxygen species produced in mitochondria are involved in age-dependent changes of hematopoietic and mesenchymal progenitor cells in mice. A study with the novel mitochondria-targeted antioxidant SkQ1. Mechanisms of Ageing and Development, 2010, 131, 415-421.	2.2	25
50	Strategy for improvement of enteropeptidase efficiency in tag removal processes. Protein Expression and Purification, 2011, 79, 191-196.	0.6	24
51	Mitochondria-targeted antioxidant SkQ1 suppresses fibrosarcoma and rhabdomyosarcoma tumour cell growth. Cell Cycle, 2018, 17, 1797-1811.	1.3	24
52	Structural rearrangements in soluble mitochondrial ATPase. Biochimica Et Biophysica Acta - Bioenergetics, 1981, 635, 552-570.	0.5	23
53	Adenine nucleotide-binding sites on mitochondrial F1-ATPase: Studies of the inactive complex formed upon binding ADP at a catalytic site. Archives of Biochemistry and Biophysics, 1992, 295, 247-252.	1.4	22
54	Ca2+-triggered membrane permeability transition in deenergized mitochondria from rat liver. FEBS Letters, 1995, 365, 75-78.	1.3	22

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55	Preservation of native properties of mitochondria in rat liver homogenate. Mitochondrion, 2001, 1, 249-267.	1.6	22
56	Proapoptotic activity of cytochrome c in living cells: effect of K72 substitutions and species differences. Molecular and Cellular Biochemistry, 2008, 314, 85-93.	1.4	22
57	Depletion of mitochondrial reactive oxygen species downregulates epithelial-to-mesenchymal transition in cervical cancer cells. Oncotarget, 2017, 8, 4901-4913.	0.8	22
58	The secretory nature of the lesion of carrot cell variant ts11, rescuable by endochitinase. Planta, 1997, 203, 381-389.	1.6	21
59	Radioprotective Effects of Mitochondria-Targeted Antioxidant SkQR1. Radiation Research, 2015, 183, 64-71.	0.7	21
60	Overexpression and refolding of thioredoxin/TRAIL fusion from inclusion bodies and further purification of TRAIL after cleavage by enteropeptidase. Biotechnology Letters, 2007, 29, 1567-1573.	1.1	20
61	Adenylylimidodiphosphate release from the active site of submitochondrial particles ATPase. FEBS Letters, 1979, 104, 215-219.	1.3	19
62	Derivatives of the cationic plant alkaloids berberine and palmatine amplify protonophorous activity of fatty acids in model membranes and mitochondria. Mitochondrion, 2013, 13, 520-525.	1.6	19
63	Novel Penetrating Cations for Targeting Mitochondria. Current Pharmaceutical Design, 2013, 19, 2795-2806.	0.9	18
64	The oxidation of sulfhydryl groups in mitochondrial F1 -ATPase decreases the rate of its inactivation by the natural protein inhibitor. FEBS Letters, 1985, 187, 253-256.	1.3	17
65	Low concentrations of uncouplers of oxidative phosphorylation prevent inflammatory activation of endothelial cells by tumor necrosis factor. Biochemistry (Moscow), 2015, 80, 610-619.	0.7	17
66	Marginal blebbing during the early stages of TNF-induced apoptosis indicates alteration in actomyosin contractility. Cell Biology International, 2004, 28, 471-475.	1.4	16
67	The Role of SKQ1 (Visomitin) in Inflammation and Wound Healing of the Ocular Surface. Ophthalmology and Therapy, 2019, 8, 63-73.	1.0	16
68	The Role Played by Mitochondria in FcÎµRI-Dependent Mast Cell Activation. Frontiers in Immunology, 2020, 11, 584210.	2.2	16
69	Combination of TRAIL with Bortezomib Shifted Apoptotic Signaling from DR4 to DR5 Death Receptor by Selective Internalization and Degradation of DR4. PLoS ONE, 2014, 9, e109756.	1.1	15
70	DUX4 Pathological Expression: Causes and Consequences in Cancer. Trends in Cancer, 2019, 5, 268-271.	3.8	15
71	MitoCLox: A Novel Mitochondria-Targeted Fluorescent Probe for Tracing Lipid Peroxidation. Oxidative Medicine and Cellular Longevity, 2019, 2019, 1-11.	1.9	15
72	The effect of the natural protein inhibitor on H+-ATPase in hepatoma 22amitochondria. FEBS Letters, 1987, 215, 300-304.	1.3	14

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73	Regulation of ATP hydrolysis in hepatoma 22a mitochondria. Archives of Biochemistry and Biophysics, 1991, 286, 604-609.	1.4	14
74	Respiration and mitochondrial membrane potential are not required for apoptosis and anti-apoptotic action of Bcl-2 in HeLa cells. Biochemistry (Moscow), 2002, 67, 222-226.	0.7	14
75	Bioenergetics and death. Biochemistry (Moscow), 2005, 70, 240-245.	0.7	14
76	Novel mitochondria-targeted compounds composed of natural constituents: Conjugates of plant alkaloids berberine and palmatine with plastoquinone. Biochemistry (Moscow), 2012, 77, 983-995.	0.7	14
77	Therapeutic Effect of the Mitochondria-Targeted Antioxidant SkQ1 on the Culture Model of Multiple Sclerosis. Oxidative Medicine and Cellular Longevity, 2019, 2019, 1-10.	1.9	14
78	Novel Fluorescent Mitochondria-Targeted Probe MitoCLox Reports Lipid Peroxidation in Response to Oxidative Stress In Vivo. Oxidative Medicine and Cellular Longevity, 2020, 2020, 1-11.	1.9	14
79	Mitochondria-targeted 1,4-naphthoquinone (SkQN) is a powerful prooxidant and cytotoxic agent. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148210.	0.5	14
80	Control of DNA integrity in skeletal muscle under physiological and pathological conditions. Cellular and Molecular Life Sciences, 2017, 74, 3439-3449.	2.4	13
81	Mitochondriaâ€Targeted Antioxidants and Uncouplers of Oxidative Phosphorylation in Treatment of the Systemic Inflammatory Response Syndrome (SIRS). Journal of Cellular Physiology, 2017, 232, 904-912.	2.0	13
82	Analysis of genes regulated by DUX4 via oxidative stress reveals potential therapeutic targets for treatment of facioscapulohumeral dystrophy. Redox Biology, 2021, 43, 102008.	3.9	12
83	Extrusion of mitochondria: Garbage clearance or cellâ€“cell communication signals?. Journal of Cellular Physiology, 2022, 237, 2345-2356.	2.0	11
84	The interaction of MgADP with H+-ATPase in rat liver mitochondria. FEBS Letters, 1988, 230, 159-162.	1.3	10
85	Activation of a complex of ATPase with the natural protein inhibitor in submitochondrial particles. FEBS Letters, 1990, 272, 145-148.	1.3	10
86	The effect of p66shc protein on the resistance of the RKO colon cancer cell line to oxidative stress. Molecular Biology, 2012, 46, 126-133.	0.4	10
87	Transfer of tightly-bound tritium from the chloroplast membranes to CF1is activated by the photophosphorylation process. FEBS Letters, 1990, 272, 184-186.	1.3	9
88	Cyclosporin A-sensitive release of Ca2+from mitochondria in intact thymocytes. FEBS Letters, 1997, 418, 131-134.	1.3	9
89	New Strategy for High-Level Expression and Purification of Biologically Active Monomeric TGF-Î²1/C77S in Escherichia coli. Molecular Biotechnology, 2015, 57, 160-171.	1.3	9
90	Regulation of ATP hydrolysis in liver mitochondria from ground squirrel. FEBS Letters, 1990, 266, 83-86.	1.3	8

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91	Structure-Function Relationships in the Interaction of Amphipathic Helical Polypeptides with the Gastric H/K ATPase. Annals of the New York Academy of Sciences, 1992, 671, 443-445.	1.8	8
92	Mutations enhancing selectivity of antitumor cytokine TRAIL to DR5 receptor increase its cytotoxicity against tumor cells. Biochemistry (Moscow), 2015, 80, 1080-1091.	0.7	8
93	Usnic acid as calcium ionophore and mast cells stimulator. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183303.	1.4	8
94	Gram-Negative Bacteria Salmonella typhimurium Boost Leukotriene Synthesis Induced by Chemoattractant fMLP to Stimulate Neutrophil Swarming. Frontiers in Pharmacology, 2021, 12, 814113.	1.6	8
95	Investigation of Soluble Mitochondrial ATPase by the Reacting Enzyme Sedimentation Method. FEBS Journal, 1979, 98, 585-589.	0.2	7
96	Preparation and characterization of mouse embryonic fibroblasts with K72W mutation in somatic cytochrome C gene. Molecular Biology, 2009, 43, 596-603.	0.4	7
97	Innate Immunity as an Executor of the Programmed Death of Individual Organisms for the Benefit of the Entire Population. International Journal of Molecular Sciences, 2021, 22, 13480.	1.8	7
98	Effects of Zn2+ on the activity and binding of the mitochondrial ATPase inhibitor protein, IF1. Journal of Bioenergetics and Biomembranes, 1993, 25, 297-306.	1.0	6
99	Mitochondrial ATP hydrolysis and ATP depletion in thymocytes and Ehrlich ascites carcinoma cells. FEBS Letters, 1994, 337, 56-59.	1.3	6
100	A-to-I RNA Editing: A Contribution to Diversity of the Transcriptome and an Organismâ€™s Development. Biochemistry (Moscow), 2010, 75, 1316-1323.	0.7	6
101	An efficient method for expression in Escherichia coli and purification of the extracellular ligand binding domain of the human TGFÎ² type II receptor. Journal of Biotechnology, 2010, 148, 113-118.	1.9	5
102	SkBQ â€” Prooxidant addressed to mitochondria. Biochemistry (Moscow), 2013, 78, 1366-1370.	0.7	5
103	Heterogeneous catalysis on the phage surface: Display of active human enteropeptidase. Biochimie, 2013, 95, 2076-2081.	1.3	5
104	Mitochondria as Targets for Endothelial Protection in COVID-19. Frontiers in Physiology, 2020, 11, 606170.	1.3	5
105	The properties and structure of the membrane ATPase from Vibrio alginolyticus. FEMS Microbiology Letters, 1988, 56, 79-82.	0.7	4
106	Energization of the membrane prevents the formation of tight inactive complexes of ATPase with MgADP in submitochondrial particles. FEBS Letters, 1989, 254, 79-82.	1.3	3
107	Enzyme turnover is essential for deactivation of F0F1-ATPase in plant mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 1995, 1229, 121-128.	0.5	3
108	Cytoskeleton inhibitors combined with TRAIL induce apoptosis in HeLa carcinoma cells overexpressing antiapoptotic protein Bcl-2. Biochemistry (Moscow), 2008, 73, 358-362.	0.7	3

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109	Dissecting structural basis of the unique substrate selectivity of human enteropeptidase catalytic subunit. Journal of Biomolecular Structure and Dynamics, 2012, 30, 62-73.	2.0	3
110	Mitochondria Are Potential Targets for the Development of New Drugs Against Neutrophilic Inflammation in Severe Pneumonia Including COVID-19. Frontiers in Pharmacology, 2021, 12, 609508.	1.6	3
111	Identification and Characterization of an 18-Kilodalton, VAMP-Like Protein in Suspension-Cultured Carrot Cells. Plant Physiology, 2000, 122, 25-34.	2.3	2
112	Infection of stromal and hemopoietic precursor cells with lentivirus vector in vivo and in vitro. Bulletin of Experimental Biology and Medicine, 2008, 145, 133-136.	0.3	2
113	High-pressure enzyme kinetics. FEBS Letters, 1984, 169, 97-100.	1.3	1
114	Editorial: Pharmacological Approaches Targeting Neutrophilic Inflammation. Frontiers in Pharmacology, 2021, 12, 763140.	1.6	1
115	A new method for studying bacterial chemotaxis. FEMS Microbiology Letters, 1982, 13, 113-116.	0.7	0
116	Zn2+Allows Differentiation between Two Kinds of IF1-ATPase Interaction in Intact Mitochondria. Annals of the New York Academy of Sciences, 1992, 671, 507-508.	1.8	0
117	Efficiency of tiotropium bromide in patients with severe persistent bronchial asthma in clinical practice. Acta Biomedica Scientifica, 2018, 3, 25-29.	0.1	0