Brian O'Rourke

List of Publications by Year
in descending order

210 papers	21,582 citations	6613 79 h-index	9861 141 g-index
220 all docs	220 docs citations	220 times ranked	16668 citing authors

#	Article	IF	Citations
1	Mitochondrial ATP-Dependent Potassium Channels. Circulation, 1998, 97, 2463-2469.	1.6	781
2	Nitric oxide regulates the heart by spatial confinement of nitric oxide synthase isoforms. Nature, 2002, 416, 337-339.	27.8	724
3	Mechanisms of Altered Excitation-Contraction Coupling in Canine Tachycardia-Induced Heart Failure, II. Circulation Research, 1999, 84, 571-586.	4.5	557
4	Synchronized Whole Cell Oscillations in Mitochondrial Metabolism Triggered by a Local Release of Reactive Oxygen Species in Cardiac Myocytes. Journal of Biological Chemistry, 2003, 278, 44735-44744.	3.4	476
5	Ionic Mechanism of Action Potential Prolongation in Ventricular Myocytes From Dogs With Pacing-Induced Heart Failure. Circulation Research, 1996, 78, 262-273.	4.5	467
6	Cytoprotective Role of Ca2+- Activated K+ Channels in the Cardiac Inner Mitochondrial Membrane. Science, 2002, 298, 1029-1033.	12.6	445
7	Mechanisms of Altered Excitation-Contraction Coupling in Canine Tachycardia-Induced Heart Failure, I. Circulation Research, 1999, 84, 562-570.	4.5	436
8	Nitric Oxide Regulates Exocytosis by S-Nitrosylation of N-ethylmaleimide-Sensitive Factor. Cell, 2003, 115, 139-150.	28.9	413
9	Evidence for Mitochondrial K+Channels and Their Role in Cardioprotection. Circulation Research, 2004, 94, 420-432.	4.5	399
10	Modulation of Mitochondrial ATP-Dependent K ⁺ Channels by Protein Kinase C. Circulation Research, 1998, 83, 110-114.	4.5	366
11	Mitochondrial ATP-Sensitive Potassium Channels Attenuate Matrix Ca ²⁺ Overload During Simulated Ischemia and Reperfusion. Circulation Research, 2001, 89, 891-898.	4.5	348
12	An Integrated Model of Cardiac Mitochondrial Energy Metabolism and Calcium Dynamics. Biophysical Journal, 2003, 84, 2734-2755.	0.5	345
13	Myocardial K _{ATP} Channels in Preconditioning. Circulation Research, 2000, 87, 845-855.	4.5	343
14	Elevated Cytosolic Na + Decreases Mitochondrial Ca 2+ Uptake During Excitation-Contraction Coupling and Impairs Energetic Adaptation in Cardiac Myocytes. Circulation Research, 2006, 99, 172-182.	4.5	335
15	Activation of Mitochondrial ATP-Dependent Potassium Channels by Nitric Oxide. Circulation, 2000, 101, 439-445.	1.6	327
16	The mitochondrial origin of postischemic arrhythmias. Journal of Clinical Investigation, 2005, 115, 3527-3535.	8.2	301
17	Elevated Cytosolic Na ⁺ Increases Mitochondrial Formation of Reactive Oxygen Species in Failing Cardiac Myocytes. Circulation, 2010, 121, 1606-1613.	1.6	273
18	Mitochondrial Ion Channels. Annual Review of Physiology, 2007, 69, 19-49.	13.1	265

#	Article	IF	Citations
19	Selective Pharmacological Agents Implicate Mitochondrial but Not Sarcolemmal K _{ATP} Channels in Ischemic Cardioprotection. Circulation, 2000, 101, 2418-2423.	1.6	257
20	Mitochondrial ATP-Sensitive Potassium Channels Inhibit Apoptosis Induced by Oxidative Stress in Cardiac Cells. Circulation Research, 2001, 88, 1267-1275.	4.5	255
21	Bax regulates primary necrosis through mitochondrial dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6566-6571.	7.1	250
22	Decreased Sarcoplasmic Reticulum Calcium Content Is Responsible for Defective Excitation-Contraction Coupling in Canine Heart Failure. Circulation, 2001, 103, 1577-1584.	1.6	246
23	Metformin Improves Mitochondrial Respiratory Activity through Activation of AMPK. Cell Reports, 2019, 29, 1511-1523.e5.	6.4	244
24	Inducible Genetic Suppression of Neuronal Excitability. Journal of Neuroscience, 1999, 19, 1691-1697.	3.6	240
25	Identification and characterization of a functional mitochondrial angiotensin system. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14849-14854.	7.1	238
26	Excitation-contraction coupling and mitochondrial energetics. Basic Research in Cardiology, 2007, 102, 369-392.	5.9	221
27	Mitochondrial Ion Channels: Gatekeepers of Life and Death. Physiology, 2005, 20, 303-315.	3.1	218
28	Percolation and criticality in a mitochondrial network. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4447-4452.	7.1	216
29	Nicorandil, a potent cardioprotective agent, acts by opening mitochondrial ATP-dependent potassium channels. Journal of the American College of Cardiology, 2000, 35, 514-518.	2.8	213
30	Nitroxyl Improves Cellular Heart Function by Directly Enhancing Cardiac Sarcoplasmic Reticulum Ca 2+ Cycling. Circulation Research, 2007, 100, 96-104.	4.5	209
31	A Mitochondrial Oscillator Dependent on Reactive Oxygen Species. Biophysical Journal, 2004, 87, 2060-2073.	0.5	206
32	Mitochondrial K channels in cell survival and death. Journal of Molecular and Cellular Cardiology, 2005, 39, 7-16.	1.9	199
33	A Computational Model Integrating Electrophysiology, Contraction, and Mitochondrial Bioenergetics in the Ventricular Myocyte. Biophysical Journal, 2006, 91, 1564-1589.	0.5	198
34	Enhancing Mitochondrial Ca ²⁺ Uptake in Myocytes From Failing Hearts Restores Energy Supply and Demand Matching. Circulation Research, 2008, 103, 279-288.	4.5	196
35	Mitochondrial ROS Drive Sudden Cardiac Death and Chronic Proteome Remodeling in Heart Failure. Circulation Research, 2018, 123, 356-371.	4.5	189
36	Sequential Opening of Mitochondrial Ion Channels as a Function of Glutathione Redox Thiol Status. Journal of Biological Chemistry, 2007, 282, 21889-21900.	3.4	185

#	Article	IF	Citations
37	Mitochondrial ROMK Channel Is a Molecular Component of MitoK _{ATP}. Circulation Research, 2012, 111, 446-454.	4.5	184
38	Cardiac mitochondria and arrhythmias. Cardiovascular Research, 2010, 88, 241-249.	3.8	183
39	Bcl-xL regulates mitochondrial energetics by stabilizing the inner membrane potential. Journal of Cell Biology, 2011, 195, 263-276.	5.2	182
40	Electrophysiological Consequences of Dyssynchronous Heart Failure and Its Restoration by Resynchronization Therapy. Circulation, 2009, 119, 1220-1230.	1.6	181
41	Glutathione/thioredoxin systems modulate mitochondrial H2O2 emission: An experimental-computational study. Journal of General Physiology, 2012, 139, 479-491.	1.9	180
42	Role of Sodium-Calcium Exchanger in Modulating the Action Potential of Ventricular Myocytes From Normal and Failing Hearts. Circulation Research, 2003, 93, 46-53.	4.5	165
43	Enhanced Ca ²⁺ -Activated Na ⁺ -Ca ²⁺ Exchange Activity in Canine Pacing-Induced Heart Failure. Circulation Research, 2000, 87, 690-698.	4.5	162
44	Inhibiting Mitochondrial Na ⁺ /Ca ²⁺ Exchange Prevents Sudden Death in a Guinea Pig Model of Heart Failure. Circulation Research, 2014, 115, 44-54.	4.5	152
45	Mechanistically Distinct Steps in the Mitochondrial Death Pathway Triggered by Oxidative Stress in Cardiac Myocytes. Circulation Research, 2003, 92, 186-194.	4.5	151
46	Synergistic Modulation of ATP-Sensitive K + Currents by Protein Kinase C and Adenosine. Circulation Research, 1996, 78, 443-454.	4.5	144
47	Redox Regulation of Mitochondrial ATP Synthase. Circulation Research, 2011, 109, 750-757.	4.5	143
48	The Role of Stochastic and Modal Gating of Cardiac L-Type Ca2+ Channels on Early After-Depolarizations. Biophysical Journal, 2005, 88, 85-95.	0.5	138
49	Mitochondrial ATP-Dependent Potassium Channels: Viable Candidate Effectors of Ischemic Preconditioninga. Annals of the New York Academy of Sciences, 1999, 874, 27-37.	3.8	137
50	Pharmacological Comparison of Native Mitochondrial KATP Channels with Molecularly Defined Surface KATP Channels. Molecular Pharmacology, 2001, 59, 225-230.	2.3	137
51	Pathophysiological and protective roles of mitochondrial ion channels. Journal of Physiology, 2000, 529, 23-36.	2.9	135
52	Mitochondrial criticality: A new concept at the turning point of life or death. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2006, 1762, 232-240.	3.8	135
53	Functional Consequences of Sulfhydryl Modification in the Pore-Forming Subunits of Cardiovascular Ca ²⁺ and Na ⁺ Channels. Circulation Research, 1995, 76, 325-334.	4.5	135
54	A Reaction-Diffusion Model of ROS-Induced ROS Release in a Mitochondrial Network. PLoS Computational Biology, 2010, 6, e1000657.	3.2	131

#	Article	IF	Citations
55	Pharmacological and Histochemical Distinctions Between Molecularly Defined Sarcolemmal K_{ATP}Channels and Native Cardiac Mitochondrial K_{ATP}Channels. Molecular Pharmacology, 1999, 55, 1000-1005.	2.3	129
56	Redox-Optimized ROS Balance and the relationship between mitochondrial respiration and ROS. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 287-295.	1.0	129
57	From mitochondrial ion channels to arrhythmias in the heart: computational techniques to bridge the spatio-temporal scales. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3381-3409.	3.4	126
58	The Fundamental Organization of Cardiac Mitochondria as a Network of Coupled Oscillators. Biophysical Journal, 2006, 91, 4317-4327.	0.5	121
59	Mitochondrial Oscillations in Physiology and Pathophysiology. Advances in Experimental Medicine and Biology, 2008, 641, 98-117.	1.6	113
60	Na+ channel regulation by Ca2+/calmodulin and Ca2+/calmodulin-dependent protein kinase II in guinea-pig ventricular myocytesâ€. Cardiovascular Research, 2010, 85, 454-463.	3.8	108
61	Adenosine Primes the Opening of Mitochondrial ATP-Sensitive Potassium Channels. Circulation, 2000, 102, 800-805.	1.6	106
62	From mitochondrial dynamics to arrhythmias. International Journal of Biochemistry and Cell Biology, 2009, 41, 1940-1948.	2.8	106
63	Molecular correlates of altered expression of potassium currents in failing rabbit myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 288, H2077-H2087.	3.2	104
64	Spatio-temporal oscillations of individual mitochondria in cardiac myocytes reveal modulation of synchronized mitochondrial clusters. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14315-14320.	7.1	96
65	Cardiac arrhythmias induced by glutathione oxidation can be inhibited by preventing mitochondrial depolarization. Journal of Molecular and Cellular Cardiology, 2010, 48, 673-679.	1.9	96
66	Î²-Adrenergic Stimulation of L-type Ca2+Channels in Cardiac Myocytes Requires the Distal Carboxyl Terminus of Î±1Cbut Not Serine 1928. Circulation Research, 2006, 98, e11-8.	4.5	95
67	Integrating Mitochondrial Energetics, Redox and ROS Metabolic Networks: A Two-Compartment Model. Biophysical Journal, 2013, 104, 332-343.	0.5	94
68	Regulation of mitochondrial Ca2+ and its effects on energetics and redox balance in normal and failing heart. Journal of Bioenergetics and Biomembranes, 2009, 41, 127-132.	2.3	93
69	Partial Inhibition of Sodium/Calcium Exchange Restores Cellular Calcium Handling in Canine Heart Failure. Circulation Research, 2004, 95, 292-299.	4.5	92
70	Unlocking the Secrets of Mitochondria in the Cardiovascular System. Circulation, 2019, 140, 1205-1216.	1.6	91
71	O-GlcNAcomic Profiling Identifies Widespread O-Linked Î²-N-Acetylglucosamine Modification (O-GlcNAcylation) in Oxidative Phosphorylation System Regulating Cardiac Mitochondrial Function. Journal of Biological Chemistry, 2015, 290, 29141-29153.	3.4	90
72	Neonatal Transplantation Confers Maturation of PSC-Derived Cardiomyocytes Conducive to Modeling Cardiomyopathy. Cell Reports, 2017, 18, 571-582.	6.4	90

#	Article	IF	Citations
73	Glutathione oxidation as a trigger of mitochondrial depolarization and oscillation in intact hearts. Journal of Molecular and Cellular Cardiology, 2008, 45, 650-660.	1.9	88
74	Mitochondrial Ca2+ uptake: Tortoise or hare?. Journal of Molecular and Cellular Cardiology, 2009, 46, 767-774.	1.9	88
75	Compartment-specific Control of Reactive Oxygen Species Scavenging by Antioxidant Pathway Enzymes. Journal of Biological Chemistry, 2016, 291, 11185-11197.	3.4	87
76	The Cardiac Acetyl-Lysine Proteome. PLoS ONE, 2013, 8, e67513.	2.5	86
77	Allyl alcohol and garlic (Allium sativum) extract produce oxidative stress in Candida albicans. Microbiology (United Kingdom), 2005, 151, 3257-3265.	1.8	83
78	Expression, activity, and pro-hypertrophic effects of PDE5A in cardiac myocytes. Cellular Signalling, 2008, 20, 2231-2236.	3.6	82
79	Cardiac Energy Metabolism: Models of Cellular Respiration. Annual Review of Biomedical Engineering, 2001, 3, 57-81.	12.3	81
80	Energetic performance is improved by specific activation of K+ fluxes through KCa channels in heart mitochondria. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 71-80.	1.0	81
81	A Mighty Small Heart: The Cardiac Proteome of Adult Drosophila melanogaster. PLoS ONE, 2011, 6, e18497.	2.5	81
82	Effects of 4'-chlorodiazepam on cellular excitation-contraction coupling and ischaemia-reperfusion injury in rabbit heart. Cardiovascular Research, 2008, 79, 141-149.	3.8	79
83	Differential Actions of Cardioprotective Agents on the Mitochondrial Death Pathway. Circulation Research, 2003, 92, 195-202.	4.5	78
84	Modeling Cardiac Action Potential Shortening Driven by Oxidative Stress-Induced Mitochondrial Oscillations in Guinea Pig Cardiomyocytes. Biophysical Journal, 2009, 97, 1843-1852.	0.5	77
85	Role of mitochondrial dysfunction in cardiac glycoside toxicity. Journal of Molecular and Cellular Cardiology, 2010, 49, 728-736.	1.9	77
86	GSH or Palmitate Preserves Mitochondrial Energetic/Redox Balance, Preventing Mechanical Dysfunction in Metabolically Challenged Myocytes/Hearts From Type 2 Diabetic Mice. Diabetes, 2012, 61, 3094-3105.	0.6	77
87	ATP consumption by uncoupled mitochondria activates sarcolemmal K_{ATP} channels in cardiac myocytes. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 280, H1882-H1888.	3.2	76
88	From Metabolomics to Fluxomics: A Computational Procedure to Translate Metabolite Profiles into Metabolic Fluxes. Biophysical Journal, 2015, 108, 163-172.	0.5	76
89	Vascular endothelial growth factor regulation of Weibel-Paladeâ€“body exocytosis. Blood, 2005, 105, 207-214.	1.4	74
90	HNO Enhances SERCA2a Activity and Cardiomyocyte Function by Promoting Redox-Dependent Phospholamban Oligomerization. Antioxidants and Redox Signaling, 2013, 19, 1185-1197.	5.4	74

#	Article	IF	Citations
91	Metabolism leaves its mark on the powerhouse: recent progress in post-translational modifications of lysine in mitochondria. Frontiers in Physiology, 2014, 5, 301.	2.8	71
92	Control and Regulation of Mitochondrial Energetics in an Integrated Model of Cardiomyocyte Function. Biophysical Journal, 2009, 96, 2466-2478.	0.5	70
93	Diallyl disulphide depletes glutathione inCandida albicans: oxidative stress-mediated cell death studied by two-photon microscopy. Yeast, 2007, 24, 695-706.	1.7	69
94	Myocardial substrate and route of administration determine acute cardiac retention and lung bio-distribution of cardiosphere-derived cells. Journal of Nuclear Cardiology, 2011, 18, 443-450.	2.1	69
95	Dynamics of matrix-free Ca2+ in cardiac mitochondria: two components of Ca2+ uptake and role of phosphate buffering. Journal of General Physiology, 2012, 139, 465-478.	1.9	69
96	Comparative Proteomics Reveals Dysregulated Mitochondrial O-GlcNAcylation in Diabetic Hearts. Journal of Proteome Research, 2016, 15, 2254-2264.	3.7	68
97	Dynamic modulation of Ca2+ sparks by mitochondrial oscillations in isolated guinea pig cardiomyocytes under oxidative stress. Journal of Molecular and Cellular Cardiology, 2011, 51, 632-639.	1.9	67
98	The Scale-Free Dynamics of Eukaryotic Cells. PLoS ONE, 2008, 3, e3624.	2.5	66
99	Mitochondrial transplantation in humans: â€œmagicalâ€•cure or cause for concern?. Journal of Clinical Investigation, 2018, 128, 5191-5194.	8.2	66
100	Mitochondrial Energetics, pH Regulation, and Ion Dynamics: AÂComputational-Experimental Approach. Biophysical Journal, 2011, 100, 2894-2903.	0.5	63
101	Mitochondrial DNA copy number can influence mortality and cardiovascular disease via methylation of nuclear DNA CpGs. Genome Medicine, 2020, 12, 84.	8.2	63
102	Mitochondria are sources of metabolic sink and arrhythmias. , 2011, 131, 287-294.		62
103	Effects of Regional Mitochondrial Depolarization on Electrical Propagation. Circulation: Arrhythmia and Electrophysiology, 2014, 7, 143-151.	4.8	60
104	Cellular and molecular determinants of altered Ca2+ handling in the failing rabbit heart: primary defects in SR Ca2+ uptake and release mechanisms. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H1607-H1618.	3.2	59
105	Impaired mitochondrial network excitability in failing guinea-pig cardiomyocytes. Cardiovascular Research, 2016, 109, 79-89.	3.8	59
106	Manipulation of Cellular Excitability by Cell Fusion. Circulation Research, 1999, 84, 964-972.	4.5	58
107	Hyaluronic acid-human blood hydrogels for stem cell transplantation. Biomaterials, 2012, 33, 8026-8033.	11.4	56
108	A Computational Model of Reactive Oxygen Species and Redox Balance in Cardiac Mitochondria. Biophysical Journal, 2013, 105, 1045-1056.	0.5	55

#	Article	IF	Citations
109	Cardiac Sodium-Calcium Exchanger Is Regulated by Allosteric Calcium and Exchanger Inhibitory Peptide at Distinct Sites. Circulation Research, 2005, 96, 91-99.	4.5	52
110	Blood-derived mitochondrial DNA copy number is associated with gene expression across multiple tissues and is predictive for incident neurodegenerative disease. Genome Research, 2021, 31, 349-358.	5.5	52
111	Optical imaging of mitochondrial function uncovers actively propagating waves of mitochondrial membrane potential collapse across intact heart. Journal of Molecular and Cellular Cardiology, 2010, 49, 565-575.	1.9	51
112	Mitochondrial Ca2+ influx and efflux rates in guinea pig cardiac mitochondria:Low and high affinity effects of cyclosporine A. Biochimica Et Biophysica Acta - Molecular Cell Research, 2011, 1813, 1373-1381.	4.1	51
113	Redox signaling and protein phosphorylation in mitochondria: progress and prospects. Journal of Bioenergetics and Biomembranes, 2009, 41, 159-168.	2.3	50
114	The fractal architecture of cytoplasmic organization: Scaling, kinetics and emergence in metabolic networks. Molecular and Cellular Biochemistry, 2004, 256, 169-184.	3.1	49
115	Cardioprotective Role of the Mitochondrial ATP-Binding Cassette Protein 1. Circulation Research, 2005, 97, 740-742.	4.5	49
116	MCU Overexpression Rescues Inotropy and Reverses Heart Failure by Reducing SR Ca ²⁺ Leak. Circulation Research, 2021, 128, 1191-1204.	4.5	47
117	Mitochondrial Networks in Cardiac Myocytes Reveal Dynamic Coupling Behavior. Biophysical Journal, 2015, 108, 1922-1933.	0.5	46
118	Deranged sodium to sudden death. Journal of Physiology, 2015, 593, 1331-1345.	2.9	46
119	Exercise triggers CAPN1-mediated AIF truncation, inducing myocyte cell death in arrhythmogenic cardiomyopathy. Science Translational Medicine, 2021, 13, .	12.4	46
120	Cdon deficiency causes cardiac remodeling through hyperactivation of WNT/Î²-catenin signaling. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1345-E1354.	7.1	45
121	Mitochondria-derived ROS bursts disturb Ca²⁺ cycling and induce abnormal automaticity in guinea pig cardiomyocytes: a theoretical study. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 308, H623-H636.	3.2	43
122	Evidence against Functional Heteromultimerization of theK ATP Channel Subunits Kir6.1 and Kir6.2. Journal of Biological Chemistry, 2000, 275, 17561-17565.	3.4	42
123	Restoring redox balance enhances contractility in heart trabeculae from type 2 diabetic rats exposed to high glucose. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 308, H291-H302.	3.2	42
124	Myocardial oxidative stress correlates with left ventricular dysfunction on strain echocardiography in a rodent model of sepsis. Intensive Care Medicine Experimental, 2017, 5, 21.	1.9	41
125	Anti-hypertrophic and anti-oxidant effect of beta3-adrenergic stimulation in myocytes requires differential neuronal NOS phosphorylation. Journal of Molecular and Cellular Cardiology, 2013, 62, 8-17.	1.9	40
126	Protein <i>S</i> -Nitrosylation Controls Glycogen Synthase Kinase 3Î² Function Independent of Its Phosphorylation State. Circulation Research, 2018, 122, 1517-1531.	4.5	40

#	Article	IF	Citations
127	Impaired mitochondrial energy supply coupled to increased H2O2 emission under energy/redox stress leads to myocardial dysfunction during TypeÂl diabetes. Clinical Science, 2015, 129, 561-574.	4.3	37
128	Cardiac Resynchronization Therapy Restores Sympathovagal Balance in the Failing Heart by Differential Remodeling of Cholinergic Signaling. Circulation Research, 2015, 116, 1691-1699.	4.5	37
129	Integrated Omic Analysis of a Guinea Pig Model of Heart Failure and Sudden Cardiac Death. Journal of Proteome Research, 2016, 15, 3009-3028.	3.7	37
130	The potential of Na+/Ca2+ exchange blockers in the treatment of cardiac disease. Expert Opinion on Investigational Drugs, 2004, 13, 653-664.	4.1	36
131	Mitochondrial Protein Phosphorylation as a Regulatory Modality: Implications for Mitochondrial Dysfunction in Heart Failure. Congestive Heart Failure, 2011, 17, 269-282.	2.0	36
132	Functional Impairment of Human Resident Cardiac Stem Cells by the Cardiotoxic Antineoplastic Agent Trastuzumab. Stem Cells Translational Medicine, 2012, 1, 289-297.	3.3	36
133	An Integrated Mitochondrial ROS Production and Scavenging Model: Implications for Heart Failure. Biophysical Journal, 2013, 105, 2832-2842.	0.5	36
134	Mitochondrial instability during regional ischemiaâ€"reperfusion underlies arrhythmias in monolayers of cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2015, 78, 90-99.	1.9	36
135	Dynamics of Early Afterdepolarization-Mediated Triggered Activity in Cardiac Monolayers. Biophysical Journal, 2012, 102, 2706-2714.	0.5	35
136	Wavelet analysis reveals heterogeneous time-dependent oscillations of individual mitochondria. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 299, H1736-H1740.	3.2	33
137	Cardiac mitochondrial network excitability: insights from computational analysis. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H2178-H2189.	3.2	33
138	What yeast and cardiomyocytes share: ultradian oscillatory redox mechanisms of cellular coherence and survival. Integrative Biology (United Kingdom), 2012, 4, 65-74.	1.3	33
139	Allele-specific differences in transcriptome, miRNome, and mitochondrial function in two hypertrophic cardiomyopathy mouse models. JCI Insight, 2018, 3, .	5.0	33
140	Two-Photon Laser Scanning Microscopy of the Transverse-Axial Tubule System in Ventricular Cardiomyocytes from Failing and Non-Failing Human Hearts. Cardiology Research and Practice, 2009, 2009, 1-9.	1.1	32
141	Mitochondria Do Not Survive Calcium Overload During Transplantation. Circulation Research, 2020, 126, 784-786.	4.5	32
142	MCC-134, a Single Pharmacophore, Opens Surface ATPâ€"Sensitive Potassium Channels, Blocks Mitochondrial ATPâ€"Sensitive Potassium Channels, and Suppresses Preconditioning. Circulation, 2003, 107, 1183-1188.	1.6	31
143	Integrative modeling of the cardiac ventricular myocyte. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 392-413.	6.6	30
144	Single-Channel Properties of the ROMK-Pore-Forming Subunit of the Mitochondrial ATP-Sensitive Potassium Channel. International Journal of Molecular Sciences, 2019, 20, 5323.	4.1	30

#	Article	IF	Citations
145	Global knockout of ROMK potassium channel worsens cardiac ischemia-reperfusion injury but cardiomyocyte-specific knockout does not: Implications for the identity of mitoKATP. Journal of Molecular and Cellular Cardiology, 2020, 139, 176-189.	1.9	28
146	A â€œMinimalâ€• Sodium Channel Construct Consisting of Ligated S5-P-S6 Segments Forms a Toxin-activatable Ionophore. Journal of Biological Chemistry, 2002, 277, 24653-24658.	3.4	27
147	Parallel Proteomics to Improve Coverage and Confidence in the Partially Annotated Oryctolagus cuniculus Mitochondrial Proteome. Molecular and Cellular Proteomics, 2011, 10, S1-S15.	3.8	27
148	Regulation of the Na+/Ca2+ Exchanger by Pyridine Nucleotide Redox Potential in Ventricular Myocytes. Journal of Biological Chemistry, 2013, 288, 31984-31992.	3.4	26
149	Mitochondrial Ca2+ in heart failure: Not enough or too much?. Journal of Molecular and Cellular Cardiology, 2021, 151, 126-134.	1.9	26
150	Control and Regulation of Integrated Mitochondrial Function in Metabolic and Transport Networks. International Journal of Molecular Sciences, 2009, 10, 1500-1513.	4.1	25
151	Precisely Control Mitochondria with Light to Manipulate Cell Fate Decision. Biophysical Journal, 2019, 117, 631-645.	0.5	23
152	Single-channel analysis of inactivation-defective rat skeletal muscle sodium channels containing the F1304Q mutation. Biophysical Journal, 1996, 71, 1285-1294.	0.5	22
153	Cardiac mitochondria exhibit dynamic functional clustering. Frontiers in Physiology, 2014, 5, 329.	2.8	22
154	Mitochondrial redox and pH signaling occurs in axonal and synaptic organelle clusters. Scientific Reports, 2016, 6, 23251.	3.3	22
155	<i>TNNT2</i> mutations in the tropomyosin binding region of TNT1 disrupt its role in contractile inhibition and stimulate cardiac dysfunction. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18822-18831.	7.1	21
156	Mitochondrial DNA copy number and incident atrial fibrillation. BMC Medicine, 2020, 18, 246.	5.5	21
157	Dual Effect of Phosphate Transport on Mitochondrial Ca2+ Dynamics. Journal of Biological Chemistry, 2015, 290, 16088-16098.	3.4	19
158	Cardiac retinoic acid levels decline in heart failure. JCI Insight, 2021, 6, .	5.0	19
159	On the Network Properties of Mitochondria. , 0, , 111-135.		18
160	The role of Na dysregulation in cardiac disease and how it impacts electrophysiology. Drug Discovery Today: Disease Models, 2007, 4, 207-217.	1.2	18
161	miRâ€181c Activates Mitochondrial Calcium Uptake by Regulating MICU1 in the Heart. Journal of the American Heart Association, 2019, 8, e012919.	3.7	18
162	Mitochondrial Ion Channels in Cardiac Function and Dysfunction. Novartis Foundation Symposium, 2007, 287, 140-156.	1.1	18

#	Article	IF	Citations
163	Suppression of K ATP currents by gene transfer of a dominant negative Kir6.2 construct. Pflugers Archiv European Journal of Physiology, 1998, 436, 957-961.	2.8	17
164	Beyond the power of mitochondria. Nature Reviews Cardiology, 2016, 13, 386-388.	13.7	17
165	Metabolic Oscillations in Heart Cells. Advances in Experimental Medicine and Biology, 1995, 382, 165-174.	1.6	17
166	Hydrogen peroxide diffusion and scavenging shapes mitochondrial network instability and failure by sensitizing ROS-induced ROS release. Scientific Reports, 2020, 10, 15758.	3.3	16
167	Mss51 deletion enhances muscle metabolism and glucose homeostasis in mice. JCI Insight, 2019, 4, .	5.0	16
168	Inhibition of phosphodiesterase type 9 reduces obesity and cardiometabolic syndrome in mice. Journal of Clinical Investigation, 2021, 131, .	8.2	16
169	Combined effects of aging and inflammation on renin-angiotensin system mediate mitochondrial dysfunction and phenotypic changes in cardiomyopathies. Oncotarget, 2015, 6, 11979-11993.	1.8	15
170	What can mitochondrial proteomics tell us about cardioprotection afforded by preconditioning?. Expert Review of Proteomics, 2008, 5, 633-636.	3.0	14
171	From bioblasts to mitochondria: ever expanding roles of mitochondria in cell physiology. Frontiers in Physiology, 2010, 1, 7.	2.8	13
172	Structural and functional plasticity in long-term cultures of adult ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2013, 65, 76-87.	1.9	13
173	Enhanced Tissue Production through Redox Control in Stem Cell-Laden Hydrogels. Tissue Engineering - Part A, 2013, 19, 2014-2023.	3.1	13
174	Hydropersulfides (RSSH) Outperform Post-Conditioning and Other Reactive Sulfur Species in Limiting Ischemiaâ€“Reperfusion Injury in the Isolated Mouse Heart. Antioxidants, 2022, 11, 1010.	5.1	13
175	Nuclear-mitochondrial communication involving miR-181c plays an important role in cardiac dysfunction during obesity. Journal of Molecular and Cellular Cardiology, 2020, 144, 87-96.	1.9	12
176	Myocardial brain-derived neurotrophic factor regulates cardiac bioenergetics through the transcription factor Yin Yang 1. Cardiovascular Research, 2023, 119, 571-586.	3.8	12
177	Cardiosphere-Derived Cells DemonstrateÂMetabolic Flexibility ThatÂIsÂInfluenced by Adhesion Status. JACC Basic To Translational Science, 2017, 2, 543-560.	4.1	11
178	Assessing Spatiotemporal and Functional Organization of Mitochondrial Networks. Methods in Molecular Biology, 2018, 1782, 383-402.	0.9	11
179	Flash Photolysis of Magnesium-DM-Nitrophen in Heart Cells. American Journal of Hypertension, 1991, 4, 416S-421S.	2.0	10
180	Reverse engineering the L-type Ca2+ channel Î±1c subunit in adult cardiac myocytes using novel adenoviral vectors. Biochemical and Biophysical Research Communications, 2005, 329, 749-754.	2.1	10

#	Article	IF	Citations
181	The Ins and Outs of Calcium in Heart Failure. Circulation Research, 2008, 102, 1301-1303.	4.5	10
182	Functional Implications of Cardiac Mitochondria Clustering. Advances in Experimental Medicine and Biology, 2017, 982, 1-24.	1.6	10
183	Harnessing the Power of Integrated Mitochondrial Biology and Physiology. Circulation Research, 2015, 117, 234-238.	4.5	9
184	Conservation of cardiac L-type Ca2+ channels and their regulation in Drosophila: A novel genetically-pliable channelopathic model. Journal of Molecular and Cellular Cardiology, 2018, 119, 64-74.	1.9	9
185	The mitochondrial regulator PGC1Î± is induced by cGMPâ€"PKG signaling and mediates the protective effects of phosphodiesterase 5 inhibition in heart failure. FEBS Letters, 2021, 596, 17.	2.8	9
186	Insulin Effects on Cardiac Na+/Ca2+ Exchanger Activity. Journal of Biological Chemistry, 2008, 283, 16505-16513.	3.4	8
187	Cellular Bioenergetics Is an Important Determinant of the Molecular Imaging Signal Derived From Luciferase and the Sodium-Iodide Symporter. Circulation Research, 2013, 112, 441-450.	4.5	8
188	Diabetes Increases the Vulnerability of the Cardiac Mitochondrial Network to Criticality. Frontiers in Physiology, 2020, 11, 175.	2.8	8
189	PDE1 Inhibition Modulates Ca _v 1.2 Channel to Stimulate Cardiomyocyte Contraction. Circulation Research, 2021, 129, 872-886.	4.5	8
190	Effect of Isoflurane on Myocardial Energetic and Oxidative Stress in Cardiac Muscle from Zucker Diabetic Fatty Rat. Journal of Pharmacology and Experimental Therapeutics, 2014, 349, 21-28.	2.5	7
191	Response by Bertero et al to Letter Regarding Article, â€œMitochondria Do Not Survive Calcium Overload". Circulation Research, 2020, 126, e58-e59.	4.5	7
192	Mitochondrial Creatine Kinase Attenuates Pathologic Remodeling in Heart Failure. Circulation Research, 2022, , CIRCRESAHA121319648.	4.5	6
193	Be Still, My Beating Heart. Circulation Research, 2010, 106, 238-239.	4.5	5
194	Seeing the Forest for the Trees. Circulation Research, 2016, 119, 1170-1172.	4.5	4
195	MitoWave: Spatiotemporal analysis of mitochondrial membrane potential fluctuations during I/R. Biophysical Journal, 2021, 120, 3261-3271.	0.5	4
196	<i>Mss51</i> deletion increases endurance and ameliorates histopathology in the <i>mdx</i> mouse model of Duchenne muscular dystrophy. FASEB Journal, 2021, 35, e21276.	0.5	4
197	A ligand to the mitochondrial benzodiazepine receptor prevents ventricular arrhythmias and LV dysfunction after ischemia or glutathione depletion. FASEB Journal, 2008, 22, 747.7.	0.5	4
198	Chapter 24 Subcellular Heterogeneity of Energy Metabolism and KATP Current Oscillation in Cardiac Myocytes. Current Topics in Membranes, 1999, , 449-467.	0.9	2

#	Article	IF	Citations
199	Cgp-37157 Abrogates The Adverse Effect Of Ouabain On Mitochondrial Energetics. Biophysical Journal, 2009, 96, 243a.	0.5	2
200	Hibernating Squirrels. Anesthesiology, 2016, 124, 1215-1217.	2.5	2
201	Building Leadership Capacity for Mission Execution in a Large Academic Department of Medicine. American Journal of Medicine, 2019, 132, 535-543.	1.5	2
202	Effects Of Mitochondrial Depolarization On Cardiac Electrical Activity In An Integrated Multiscale Model Of The Myocardium. Biophysical Journal, 2009, 96, 663a-664a.	0.5	1
203	Metabolic control analysis applied to mitochondrial networks. , 2011, 2011, 4673-6.		1
204	Bioenergetics of Contractile Function in Heart Trabeculae from Diabetic Rats. Biophysical Journal, 2012, 102, 571a.	0.5	1
205	Manipulability of Î²-Adrenergic Responsiveness in Adult Guniea-Pig Cardiomyocyte Cultures. Biophysical Journal, 2013, 104, 281a.	0.5	1
206	L-Type Calcium Channels are a Major Source of Plasmalemmel Calcium Influx for Drosophila Cardiomyocytes. Biophysical Journal, 2019, 116, 152a-153a.	0.5	1
207	Mitochondrial Ion Channels. , 2007, , 221-238.		0
208	Bcl-x_Lregulates mitochondrial energetics by stabilizing the inner membrane potential. Journal of Experimental Medicine, 2011, 208, i29-i29.	8.5	0
209	Regional Oxidative Stress Disrupts the Normal Propagation of Voltage Waves and Promotes Reentry in Monolayers of Cardiac Myocytes. FASEB Journal, 2015, 29, 1049.8.	0.5	0
210	Abstract 21327: <i>In vivo</i> Reduction of Mitochondrial Oxidative Stress Abolishes Arrhythmic Sudden Cardiac Death (SCD) in Non-Ischemic Heart Failure. Circulation, 2017, 136, .	1.6	0