Robert T Dirksen

List of Publications by Year
in descending order

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Version: 2024-02-01

106 papers	7,092 citations	44066 48 h-index	58576 82 g-index
115 all docs	115 docs citations	115 times ranked	5971 citing authors

#	Article	IF	Citations
1	Exercise attenuates juvenile irradiation-induced skeletal muscle decline by improving calcium handling and decreasing mitochondrial stress. Journal of General Physiology, 2022, 154, .	1.9	0
2	Acute exposure to extracellular BTP2 does not inhibit Ca2+ release during EC coupling in intact skeletal muscle fibers. Journal of General Physiology, 2022, 154, .	1.9	4
3	Iron Dysregulation in Mitochondrial Dysfunction and Alzheimerâ€™s Disease. Antioxidants, 2022, 11, 692.	5.1	30
4	Endurance exercise attenuates juvenile irradiation-induced skeletal muscle functional decline and mitochondrial stress. Skeletal Muscle, 2022, 12, 8.	4.2	5
5	Variants in ASPH cause exertional heat illness and are associated with malignant hyperthermia susceptibility. Nature Communications, 2022, 13, .	12.8	7
6	Variant curation expert panel recommendations for RYR1 pathogenicity classifications in malignant hyperthermia susceptibility. Genetics in Medicine, 2021, 23, 1288-1295.	2.4	46
7	Altered Ca2+ Handling and Oxidative Stress Underlie Mitochondrial Damage and Skeletal Muscle Dysfunction in Aging and Disease. Metabolites, 2021, 11, 424.	2.9	27
8	How mutations in RYR1 that cause malignant hyperthermia increase RYR1 sensitivity to activators. Cell Calcium, 2021, 97, 102412.	2.4	0
9	PharmGKB summary: very important pharmacogene information for CACNA1S. Pharmacogenetics and Genomics, 2020, 30, 34-44.	1.5	7
10	Adaptive thermogenesis enhances the life-threatening response to heat in mice with an Ryr1 mutation. Nature Communications, 2020, 11, 5099.	12.8	16
11	Ryanodine receptor 1-related disorders: an historical perspective and proposal for a unified nomenclature. Skeletal Muscle, 2020, 10, 32.	4.2	45
12	Biophysical mechanisms for QRS- and QTc-interval prolongation in mice with cardiac expression of expanded CUG-repeat RNA. Journal of General Physiology, 2020, 152, .	1.9	7
13	Pre-assembled Ca2+ entry units and constitutively active Ca2+ entry in skeletal muscle of calsequestrin-1 knockout mice. Journal of General Physiology, 2020, 152, .	1.9	32
14	Muscle-specific SMN reduction reveals motor neuronâ€“independent disease in spinal muscular atrophy models. Journal of Clinical Investigation, 2020, 130, 1271-1287.	8.2	67
15	Identification of drug modifiers for RYR1-related myopathy using a multi-species discovery pipeline. ELife, 2020, 9, .	6.0	20
16	Introduction. Archives of Biochemistry and Biophysics, 2019, 669, 31.	3.0	0
17	Mouse model of severe recessive RYR1-related myopathy. Human Molecular Genetics, 2019, 28, 3024-3036.	2.9	22
18	Isolating a reverse-mode ATP synthaseâ€“dependent mechanism of mitoflash activation. Journal of General Physiology, 2019, 151, 708-713.	1.9	4

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19	Substrate-dependent and cyclophilin D-independent regulation of mitochondrial flashes in skeletal and cardiac muscle. Archives of Biochemistry and Biophysics, 2019, 665, 122-131.	3.0	2
20	Clinical Pharmacogenetics Implementation Consortium (<scp>CPIC</scp>) Guideline for the Use of Potent Volatile Anesthetic Agents and Succinylcholine in the Context of <scp>RYR</scp>1 or <scp>CACNA</scp>1S Genotypes. Clinical Pharmacology and Therapeutics, 2019, 105, 1338-1344.	4.7	56
21	Transverse tubule remodeling enhances Orai1-dependent Ca2+ entry in skeletal muscle. ELife, 2019, 8, .	6.0	36
22	Mechanosensitive Gene Regulation by Myocardin-Related Transcription Factors Is Required for Cardiomyocyte Integrity in Load-Induced Ventricular Hypertrophy. Circulation, 2018, 138, 1864-1878.	1.6	34
23	Risk of cardiac events in Long QT syndrome patients when taking antiseizure medications. Translational Research, 2018, 191, 81-92.e7.	5.0	16
24	Tamoxifen therapy in a murine model of myotubular myopathy. Nature Communications, 2018, 9, 4849.	12.8	41
25	Role of STIM1/ORAI1-mediated store-operated Ca2+ entry in skeletal muscle physiology and disease. Cell Calcium, 2018, 76, 101-115.	2.4	67
26	Cardiac metabolic effects of K_{Na}1.2 channel deletion and evidence for its mitochondrial localization. FASEB Journal, 2018, 32, 6135-6149.	0.5	23
27	Congenital myopathy results from misregulation of a muscle Ca ²⁺ channel by mutant Stac3. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E228-E236.	7.1	43
28	Exercise-dependent formation of new junctions that promote STIM1-Orai1 assembly in skeletal muscle. Scientific Reports, 2017, 7, 14286.	3.3	67
29	Reduced threshold for store overload-induced Ca2+ release is a common defect of RyR1 mutations associated with malignant hyperthermia and central core disease. Biochemical Journal, 2017, 474, 2749-2761.	3.7	17
30	Trojan triplets: RNA-based pathomechanisms for muscle dysfunction in Huntingtonâ€™s disease. Journal of General Physiology, 2017, 149, 49-53.	1.9	0
31	Loss of adult skeletal muscle stem cells drives age-related neuromuscular junction degeneration. ELife, 2017, 6, .	6.0	116
32	Orai1 enhances muscle endurance by promoting fatigueâ€resistant type I fiber content but not through acute storeâ€operated Ca²⁺entry. FASEB Journal, 2016, 30, 4109-4119.	0.5	46
33	Genetic biomarkers for the risk of seizures in long QT syndrome. Neurology, 2016, 87, 1660-1668.	1.1	38
34	Mitochondrial Flash: Integrative Reactive Oxygen Species and pH Signals in Cell and Organelle Biology. Antioxidants and Redox Signaling, 2016, 25, 534-549.	5.4	54
35	Neuronal NTPDase3 Mediates Extracellular ATP Degradation in Trigeminal Nociceptive Pathway. PLoS ONE, 2016, 11, e0164028.	2.5	9
36	Regions of ryanodine receptors that influence activation by the dihydropyridine receptor Î²1a subunit. Skeletal Muscle, 2015, 5, 23.	4.2	6

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37	Oxidative stress, mitochondrial damage, and cores in muscle from calsequestrin-1 knockout mice. Skeletal Muscle, 2015, 5, 10.	4.2	33
38	Antioxidants Protect Calsequestrin-1 Knockout Mice from Halothane- and Heat-induced Sudden Death. Anesthesiology, 2015, 123, 603-617.	2.5	35
39	Inducible depletion of adult skeletal muscle stem cells impairs the regeneration of neuromuscular junctions. ELife, 2015, 4, .	6.0	103
40	Age-dependent uncoupling of mitochondria from Ca2+ release units in skeletal muscle. Oncotarget, 2015, 6, 35358-35371.	1.8	83
41	New method for determining total calcium content in tissue applied to skeletal muscle with and without calsequestrin. Journal of General Physiology, 2015, 145, 127-153.	1.9	14
42	Ca2+ permeation and/or binding to CaV1.1 fine-tunes skeletal muscle Ca2+ signaling to sustain muscle function. Skeletal Muscle, 2015, 5, 4.	4.2	43
43	Ca2+ Binding/Permeation via Calcium Channel, CaV1.1, Regulates the Intracellular Distribution of the Fatty Acid Transport Protein, CD36, and Fatty Acid Metabolism. Journal of Biological Chemistry, 2015, 290, 23751-23765.	3.4	39
44	Role of Mitofusin-2 in mitochondrial localization and calcium uptake in skeletal muscle. Cell Calcium, 2015, 57, 14-24.	2.4	104
45	Electrical Disturbances in the Brain and Heart in Long QT Syndrome: A Dangerous Synergy. FASEB Journal, 2015, 29, 1042.1.	0.5	1
46	Enhanced Ca2+ influx from STIM1â€“Orai1 induces muscle pathology in mouse models of muscular dystrophy. Human Molecular Genetics, 2014, 23, 3706-3715.	2.9	52
47	RGK proteins. Channels, 2014, 8, 286-287.	2.8	0
48	Cheng et al. reply. Nature, 2014, 514, E14-E15.	27.8	19
49	Monovalent Cationic Channel Activity in the Inner Membrane of Nuclei from Skeletal Muscle Fibers. Biophysical Journal, 2014, 107, 2027-2036.	0.5	3
50	Triadopathies: An Emerging Class of Skeletal Muscle Diseases. Neurotherapeutics, 2014, 11, 773-785.	4.4	60
51	Characterization of ryanodine receptor type 1 single channel activity using â€œon-nucleusâ€•patch clamp. Cell Calcium, 2014, 56, 96-107.	2.4	22
52	Orai1-dependent calcium entry promotes skeletal muscle growth and limits fatigue. Nature Communications, 2013, 4, 2805.	12.8	118
53	Respective Contribution of Mitochondrial Superoxide and pH to Mitochondria-targeted Circularly Permuted Yellow Fluorescent Protein (mt-cpYFP) Flash Activity. Journal of Biological Chemistry, 2013, 288, 10567-10577.	3.4	67
54	Accelerated Activation of SOCE Current in Myotubes from Two Mouse Models of Anesthetic- and Heat-Induced Sudden Death. PLoS ONE, 2013, 8, e77633.	2.5	36

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55	Ca2+ Release in Muscle Fibers Expressing R4892W and G4896V Type 1 Ryanodine Receptor Disease Mutants. PLoS ONE, 2013, 8, e54042.	2.5	6
56	Mitochondrial superoxide flashes: From discovery to new controversies. Journal of General Physiology, 2012, 139, 425-434.	1.9	39
57	Adrenergic Signaling Controls RGK-Dependent Trafficking of Cardiac Voltage-Gated L-Type Ca 2+ Channels Through PKD1. Circulation Research, 2012, 110, 59-70.	4.5	26
58	AICAR prevents heat-induced sudden death in RyR1 mutant mice independent of AMPK activation. Nature Medicine, 2012, 18, 244-251.	30.7	99
59	Muscle weakness in myotonic dystrophy associated with misregulated splicing and altered gating of CaV1.1 calcium channel. Human Molecular Genetics, 2012, 21, 1312-1324.	2.9	146
60	Temperature and RyR1 Regulate the Activation Rate of Store-Operated Ca2+ Entry Current in Myotubes. Biophysical Journal, 2012, 103, 202-211.	0.5	32
61	Allele-Specific Gene Silencing in Two Mouse Models of Autosomal Dominant Skeletal Myopathy. PLoS ONE, 2012, 7, e49757.	2.5	17
62	Mitochondrial superoxide flashes: metabolic biomarkers of skeletal muscle activity and disease. FASEB Journal, 2011, 25, 3068-3078.	0.5	90
63	Defects in Ca²⁺ release associated with local expression of pathological ryanodine receptors in mouse muscle fibres. Journal of Physiology, 2011, 589, 5361-5382.	2.9	19
64	Differential impact of mitochondrial positioning on mitochondrial Ca²⁺ uptake and Ca²⁺ spark suppression in skeletal muscle. American Journal of Physiology - Cell Physiology, 2011, 301, C1128-C1139.	4.6	50
65	Muscle weakness in Ryr1I4895T/WT knock-in mice as a result of reduced ryanodine receptor Ca2+ ion permeation and release from the sarcoplasmic reticulum. Journal of General Physiology, 2011, 137, 43-57.	1.9	76
66	The I4895T mutation in the type 1 ryanodine receptor induces fiberâ€type specific alterations in skeletal muscle that mimic premature aging. Aging Cell, 2010, 9, 958-970.	6.7	42
67	Sarcolemmal-restricted localization of functional ClC-1 channels in mouse skeletal muscle. Journal of General Physiology, 2010, 136, 597-613.	1.9	42
68	Emerging questions about the macromolecular machines of muscle. Journal of General Physiology, 2010, 136, 3-5.	1.9	1
69	Ryanodinopathies. Current Topics in Membranes, 2010, 66, 139-167.	0.9	6
70	A retrograde signal from RyR1 alters DHP receptor inactivation and limits window Ca ²⁺ release in muscle fibers of Y522S RyR1 knock-in mice. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4531-4536.	7.1	62
71	Anestheticâ€and heatâ€induced sudden death in calsequestrinâ€1â€knockout mice. FASEB Journal, 2009, 23, 1710-1720.	0.5	99
72	Mitochondria Are Linked to Calcium Stores in Striated Muscle by Developmentally Regulated Tethering Structures. Molecular Biology of the Cell, 2009, 20, 1058-1067.	2.1	240

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73	Characterization and temporal development of cores in a mouse model of malignant hyperthermia. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21996-22001.	7.1	113
74	Alternative splicing of RyR1 alters the efficacy of skeletal EC coupling. Cell Calcium, 2009, 45, 264-274.	2.4	52
75	Checking your SOCCs and feet: the molecular mechanisms of Ca²⁺ entry in skeletal muscle. Journal of Physiology, 2009, 587, 3139-3147.	2.9	117
76	Sarcoplasmic reticulumâ€“mitochondrial through-space coupling in skeletal muscleThis paper is one of a selection of papers published in this Special Issue, entitled 14th International Biochemistry of Exercise ConferenceÂâ€“ Muscles as Molecular and Metabolic Machines, and has undergone the Journalâ€™s usual peer review process.. Applied Physiology, Nutrition and Metabolism, 2009, 34, 389-395.	1.9	54
77	Sarcoplasmic Reticulum-Mitochondrial Symbiosis. Exercise and Sport Sciences Reviews, 2009, 37, 29-35.	3.0	57
78	Differential dependence of storeâ€operated and excitationâ€coupled Ca²⁺ entry in skeletal muscle on STIM1 and Orai1. Journal of Physiology, 2008, 586, 4815-4824.	2.9	149
79	RyR1 S-Nitrosylation Underlies Environmental Heat Stroke and Sudden Death in Y522S RyR1 Knockin Mice. Cell, 2008, 133, 53-65.	28.9	321
80	Superoxide Flashes in Single Mitochondria. Cell, 2008, 134, 279-290.	28.9	643
81	Chloride channelopathy in myotonic dystrophy resulting from loss of posttranscriptional regulation for CLCN1. American Journal of Physiology - Cell Physiology, 2007, 292, C1291-C1297.	4.6	65
82	Muscle Chloride Channel Dysfunction in Two Mouse Models of Myotonic Dystrophy. Journal of General Physiology, 2007, 129, 79-94.	1.9	98
83	An Ryr1 ^{I4895T} mutation abolishes Ca ²⁺ release channel function and delays development in homozygous offspring of a mutant mouse line. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18537-18542.	7.1	74
84	Triadin Binding to the C-Terminal Luminal Loop of the Ryanodine Receptor is Important for Skeletal Muscle Excitationâ€“Contraction Coupling. Journal of General Physiology, 2007, 130, 365-378.	1.9	70
85	A variably spliced region in the type 1 ryanodine receptor may participate in an inter-domain interaction. Biochemical Journal, 2007, 401, 317-324.	3.7	25
86	Two central core disease (CCD) deletions in the C-terminal region of RYR1 alter muscle excitation-contraction (EC) coupling by distinct mechanisms. Human Mutation, 2007, 28, 61-68.	2.5	26
87	Correction of ClC-1 splicing eliminates chloride channelopathy and myotonia in mouse models of myotonic dystrophy. Journal of Clinical Investigation, 2007, 117, 3952-7.	8.2	215
88	Sarcoplasmic reticulum: The dynamic calcium governor of muscle. Muscle and Nerve, 2006, 33, 715-731.	2.2	183
89	Heatâ€and anesthesiaâ€induced malignant hyperthermia in an RyR1 knockâ€in mouse. FASEB Journal, 2006, 20, 329-330.	0.5	179
90	Rapamycin and FK506 reduce skeletal muscle voltage sensor expression and function. Cell Calcium, 2005, 38, 35-44.	2.4	14

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91	Altered mRNA splicing of the skeletal muscle ryanodine receptor and sarcoplasmic/endoplasmic reticulum Ca2+-ATPase in myotonic dystrophy type 1. Human Molecular Genetics, 2005, 14, 2189-2200.	2.9	247
92	Functional analysis of the R1086H malignant hyperthermia mutation in the DHPR reveals an unexpected influence of the III-IV loop on skeletal muscle EC coupling. American Journal of Physiology - Cell Physiology, 2004, 287, C1094-C1102.	4.6	107
93	Distinct Effects on Ca2+ Handling Caused by Malignant Hyperthermia and Central Core Disease Mutations in RyR1. Biophysical Journal, 2004, 87, 3193-3204.	0.5	98
94	Dynamic alterations in myoplasmic Ca2+ in malignant hyperthermia and central core disease. Biochemical and Biophysical Research Communications, 2004, 322, 1256-1266.	2.1	50
95	FKBP12 Binding to RyR1 Modulates Excitation-Contraction Coupling in Mouse Skeletal Myotubes. Journal of Biological Chemistry, 2003, 278, 22600-22608.	3.4	61
96	The Pore Region of the Skeletal Muscle Ryanodine Receptor Is a Primary Locus for Excitation-Contraction Uncoupling in Central Core Disease. Journal of General Physiology, 2003, 121, 277-286.	1.9	70
97	Calmodulin Binding to the 3614â€“3643 Region of RyR1 Is Not Essential for Excitationâ€“Contraction Coupling in Skeletal Myotubes. Journal of General Physiology, 2002, 120, 337-347.	1.9	22
98	Reactive oxygen/nitrogen species and the aged brain: Radical impact of ion channel function. Neurobiology of Aging, 2002, 23, 837-839.	3.1	8
99	Bi-directional coupling between dihydropyridine receptors and ryanodine receptors. Frontiers in Bioscience - Landmark, 2002, 7, d659-670.	3.0	65
100	Altered Ryanodine Receptor Function in Central Core Disease Leaky or Uncoupled Ca2+ Release Channels?. Trends in Cardiovascular Medicine, 2002, 12, 189-197.	4.9	115
101	Ca2+ Release through Ryanodine Receptors Regulates Skeletal Muscle L-type Ca2+ Channel Expression. Journal of Biological Chemistry, 2001, 276, 17732-17738.	3.4	43
102	Functional Effects of Central Core Disease Mutations in the Cytoplasmic Region of the Skeletal Muscle Ryanodine Receptor. Journal of General Physiology, 2001, 118, 277-290.	1.9	137
103	Prolonged depolarization promotes fast gating kinetics of Lâ€type Ca 2+ channels in mouse skeletal myotubes. Journal of Physiology, 2000, 529, 647-659.	2.9	8
104	Functional Impact of the Ryanodine Receptor on the Skeletal Muscle L-Type Ca2+ Channel. Journal of General Physiology, 2000, 115, 467-480.	1.9	104
105	Role of Calcium Permeation in Dihydropyridine Receptor Function. Journal of General Physiology, 1999, 114, 393-404.	1.9	67
106	Enhanced dihydropyridine receptor channel activity in the presence of ryanodine receptor. Nature, 1996, 380, 72-75.	27.8	444