Kenneth S Campbell

List of Publications by Year
in descending order

92 papers	3,808 citations	159585 30 h-index	138484 58 g-index
99 all docs	99 docs citations	99 times ranked	4504 citing authors

#	Article	IF	Citations
1	Effective fiber hypertrophy in satellite cell-depleted skeletal muscle. Development (Cambridge), 2011, 138, 3657-3666.	2.5	531
2	Identification of the circadian transcriptome in adult mouse skeletal muscle. Physiological Genomics, 2007, 31, 86-95.	2.3	300
3	CLOCK and BMAL1 regulate <i>MyoD</i> and are necessary for maintenance of skeletal muscle phenotype and function. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19090-19095.	7.1	299
4	Distinct growth hormone receptor signaling modes regulate skeletal muscle development and insulin sensitivity in mice. Journal of Clinical Investigation, 2010, 120, 4007-4020.	8.2	171
5	MyoVision: software for automated high-content analysis of skeletal muscle immunohistochemistry. Journal of Applied Physiology, 2018, 124, 40-51.	2.5	161
6	Development of dilated cardiomyopathy in<i>Bmal1</i>-deficient mice. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 303, H475-H485.	3.2	127
7	Satellite cell depletion does not inhibit adult skeletal muscle regrowth following unloading-induced atrophy. American Journal of Physiology - Cell Physiology, 2012, 303, C854-C861.	4.6	122
8	TNF-Î± acts via TNFR1 and muscle-derived oxidants to depress myofibrillar force in murine skeletal muscle. Journal of Applied Physiology, 2008, 104, 694-699.	2.5	118
9	Titin isoform changes in rat myocardium during development. Mechanisms of Development, 2004, 121, 1301-1312.	1.7	96
10	History-Dependent Mechanical Properties of Permeabilized Rat Soleus Muscle Fibers. Biophysical Journal, 2002, 82, 929-943.	0.5	91
11	Omecamtiv Mecarbil Enhances the Duty Ratio of Human Î²-Cardiac Myosin Resulting in Increased Calcium Sensitivity and Slowed Force Development in Cardiac Muscle. Journal of Biological Chemistry, 2017, 292, 3768-3778.	3.4	82
12	Coupling of Adjacent Tropomyosins Enhances Cross-Bridge-Mediated Cooperative Activation in a Markov Model of the Cardiac Thin Filament. Biophysical Journal, 2010, 98, 2254-2264.	0.5	79
13	Interactions between Connected Half-Sarcomeres Produce Emergent Mechanical Behavior in a Mathematical Model of Muscle. PLoS Computational Biology, 2009, 5, e1000560.	3.2	75
14	Cooperative Mechanisms in the Activation Dependence of the Rate of Force Development in Rabbit Skinned Skeletal Muscle Fibers. Journal of General Physiology, 2001, 117, 133-148.	1.9	60
15	Developmental changes in rat cardiac titin/connectin: transitions in normal animals and in mutants with a delayed pattern of isoform transition. Journal of Muscle Research and Cell Motility, 2006, 26, 325-332.	2.0	56
16	Force-Dependent Recruitment from the Myosin Off State Contributes to Length-Dependent Activation. Biophysical Journal, 2018, 115, 543-553.	0.5	54
17	SLControl: PC-based data acquisition and analysis for muscle mechanics. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 285, H2857-H2864.	3.2	51
18	A thixotropic effect in contracting rabbit psoas muscle: prior movement reduces the initial tension response to stretch. Journal of Physiology, 2000, 525, 531-548.	2.9	50

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19	Diabetes with heart failure increases methylglyoxal modifications in the sarcomere, which inhibit function. JCI Insight, 2018, 3, .	5.0	50
20	Transmural heterogeneity of cellular level power output is reduced in human heart failure. Journal of Molecular and Cellular Cardiology, 2014, 72, 1-8.	1.9	49
21	Filament Compliance Effects Can Explain Tension Overshoots during Force Development. Biophysical Journal, 2006, 91, 4102-4109.	0.5	46
22	A Mathematical Model of Muscle Containing Heterogeneous Half-Sarcomeres Exhibits Residual Force Enhancement. PLoS Computational Biology, 2011, 7, e1002156.	3.2	45
23	Mechanisms of residual force enhancement in skeletal muscle: insights from experiments and mathematical models. Biophysical Reviews, 2011, 3, 199-207.	3.2	44
24	A short history of the development of mathematical models of cardiac mechanics. Journal of Molecular and Cellular Cardiology, 2019, 127, 11-19.	1.9	44
25	Hypertrophic cardiomyopathy Î²-cardiac myosin mutation (P710R) leads to hypercontractility by disrupting super relaxed state. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	43
26	Abnormal contractility in human heart myofibrils from patients with dilated cardiomyopathy due to mutations in TTN and contractile protein genes. Scientific Reports, 2017, 7, 14829.	3.3	40
27	Impact of myocyte strain on cardiac myofilament activation. Pflugers Archiv European Journal of Physiology, 2011, 462, 3-14.	2.8	38
28	Effect of muscle length on cross-bridge kinetics in intact cardiac trabeculae at body temperature. Journal of General Physiology, 2013, 141, 133-139.	1.9	38
29	Altered ventricular torsion and transmural patterns of myocyte relaxation precede heart failure in aging F344 rats. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H676-H686.	3.2	37
30	Diverse and complex muscle spindle afferent firing properties emerge from multiscale muscle mechanics. ELife, 2020, 9, .	6.0	37
31	Integrated multi-omic characterization of congenital heart disease. Nature, 2022, 608, 181-191.	27.8	37
32	Effects of mavacamten on Ca²⁺ sensitivity of contraction as sarcomere length varied in human myocardium. British Journal of Pharmacology, 2020, 177, 5609-5621.	5.4	36
33	Dynamic coupling of regulated binding sites and cycling myosin heads in striated muscle. Journal of General Physiology, 2014, 143, 387-399.	1.9	34
34	Cycling Cross-Bridges Increase Myocardial Stiffness at Submaximal Levels of Ca2+ Activation. Biophysical Journal, 2003, 84, 3807-3815.	0.5	32
35	Muscle thixotropyâ€”where are we now?. Journal of Applied Physiology, 2019, 126, 1790-1799.	2.5	32
36	Diabetic microcirculatory disturbances and pathologic erythropoiesis are provoked by deposition of amyloid-forming amylin in red blood cells and capillaries. Kidney International, 2020, 97, 143-155.	5.2	31

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37	GelBandFitter â€“ A computer program for analysis of closely spaced electrophoretic and immunoblotted bands. Electrophoresis, 2009, 30, 848-851.	2.4	29
38	Myocardial relaxation is accelerated by fast stretch, not reduced afterload. Journal of Molecular and Cellular Cardiology, 2017, 103, 65-73.	1.9	28
39	Sphingomyelinase depresses force and calcium sensitivity of the contractile apparatus in mouse diaphragm muscle fibers. Journal of Applied Physiology, 2012, 112, 1538-1545.	2.5	27
40	Compliance Accelerates Relaxation in Muscle by Allowing Myosin Heads to Move Relative to Actin. Biophysical Journal, 2016, 110, 661-668.	0.5	23
41	Tension Recovery in Permeabilized Rat Soleus Muscle Fibers after Rapid Shortening and Restretch. Biophysical Journal, 2006, 90, 1288-1294.	0.5	21
42	Numerical Evaluation of Myofiber Orientation and Transmural Contractile Strength on Left Ventricular Function. Journal of Biomechanical Engineering, 2015, 137, 044502.	1.3	21
43	HeartÂFailure in Humans Reduces Contractile Force in Myocardium From Both Ventricles. JACC Basic To Translational Science, 2020, 5, 786-798.	4.1	20
44	Temperature and transmural region influence functional measurements in unloaded left ventricular cardiomyocytes. Physiological Reports, 2013, 1, e00158.	1.7	19
45	Attenuated sarcomere lengthening of the aged murine left ventricle observed using two-photon fluorescence microscopy. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H918-H925.	3.2	19
46	A Protocol for Collecting Human Cardiac Tissue for Research. The VAD Journal: the Journal of Mechanical Assisted Circulation and Heart Failure, 2016, 2, .	2.0	19
47	High-Risk Long QT Syndrome Mutations in the Kv7.1 (KCNQ1) Pore Disrupt the Molecular Basis for Rapid K⁺ Permeation. Biochemistry, 2012, 51, 9076-9085.	2.5	17
48	Modulating Beta-Cardiac Myosin Function at the Molecular and Tissue Levels. Frontiers in Physiology, 2016, 7, 659.	2.8	16
49	Titin-truncating mutations associated with dilated cardiomyopathy alter length-dependent activation and its modulation via phosphorylation. Cardiovascular Research, 2022, 118, 241-253.	3.8	16
50	Regulation of Myofilament Contractile Function in Human Donor and Failing Hearts. Frontiers in Physiology, 2020, 11, 468.	2.8	16
51	Cardiac myosin regulatory light chain kinase modulates cardiac contractility by phosphorylating both myosin regulatory light chain and troponin I. Journal of Biological Chemistry, 2020, 295, 4398-4410.	3.4	16
52	Cell- and molecular-level mechanisms contributing to diastolic dysfunction in HFpEF. Journal of Applied Physiology, 2015, 119, 1228-1232.	2.5	15
53	Short-Range Mechanical Properties of Skeletal and Cardiac Muscles. Advances in Experimental Medicine and Biology, 2010, 682, 223-246.	1.6	15
54	Chaperone-mediated autophagy protects cardiomyocytes against hypoxic-cell death. American Journal of Physiology - Cell Physiology, 2022, 323, C1555-C1575.	4.6	15

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55	Myocardial short-range force responses increase with age in F344 rats. Journal of Molecular and Cellular Cardiology, 2009, 46, 39-46.	1.9	14
56	Effectiveness of Sulfur-Containing Antioxidants in Delaying Skeletal Muscle Fatigue. Medicine and Science in Sports and Exercise, 2011, 43, 1025-1031.	0.4	13
57	Evaluation of a Novel Finite Element Model of Active Contraction in the Heart. Frontiers in Physiology, 2018, 9, 425.	2.8	13
58	Multiscale simulations of left ventricular growth and remodeling. Biophysical Reviews, 2021, 13, 729-746.	3.2	13
59	FiberSim: A flexible open-source model of myofilament-level contraction. Biophysical Journal, 2022, 121, 175-182.	0.5	13
60	The rate of tension recovery in cardiac muscle correlates with the relative residual tension prevailing after restretch. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H2020-H2022.	3.2	11
61	Closing the therapeutic loop. Archives of Biochemistry and Biophysics, 2019, 663, 129-131.	3.0	11
62	Computational Investigation of Transmural Differences in Left Ventricular Contractility. Journal of Biomechanical Engineering, 2016, 138, .	1.3	10
63	Multiscale Modeling of Cardiovascular Function Predicts That the End-Systolic Pressure Volume Relationship Can Be Targeted via Multiple Therapeutic Strategies. Frontiers in Physiology, 2020, 11, 1043.	2.8	10
64	Renal Angiotensinogen Is Predominantly Liver Derived in Nonhuman Primates. Arteriosclerosis, Thrombosis, and Vascular Biology, 2021, 41, 2851-2853.	2.4	10
65	Force-dependent recruitment from myosin OFF-state increases end-systolic pressureâ€“volume relationship in left ventricle. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2683-2692.	2.8	9
66	Genomeâ€wide expression analysis and EMX2 gene expression in embryonic myoblasts committed to diverse skeletal muscle fiber type fates. Developmental Dynamics, 2013, 242, 1001-1020.	1.8	8
67	Regional quantification of myocardial mechanics in rat using 3D cine DENSE cardiovascular magnetic resonance. NMR in Biomedicine, 2017, 30, e3733.	2.8	8
68	The effects of pH and Pi on tension and Ca2+ sensitivity of ventricular myofilaments from the anoxia-tolerant painted turtle. Journal of Experimental Biology, 2017, 220, 4234-4241.	1.7	8
69	Impact of regulatory light chain mutation K104E on the ATPase and motor properties of cardiac myosin. Journal of General Physiology, 2021, 153, .	1.9	8
70	A Protocol for Collecting Human Cardiac Tissue for Research. The VAD Journal: the Journal of Mechanical Assisted Circulation and Heart Failure, 0, , .	2.0	8
71	Increased myocardial short-range forces in a rodent model of diabetes reflect elevated content of Î² myosin heavy chain. Archives of Biochemistry and Biophysics, 2014, 552-553, 92-99.	3.0	7
72	Myocyte contractility can be maintained by storing cells with the myosin ATPase inhibitor 2,3 butanedione monoxime. Physiological Reports, 2015, 3, e12445.	1.7	7

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73	Response to Bianco et al.: Interaction Forces between F-actin and Titin PEVK Domain Measured with Optical Tweezers. Biophysical Journal, 2008, 94, 327-328.	0.5	5
74	Superâ€relaxation helps muscles work more efficiently. Journal of Physiology, 2017, 595, 1007-1008.	2.9	4
75	Fast-relaxing cardiomyocytes exert a dominant role in the relaxation behavior of heterogeneous myocardium. Archives of Biochemistry and Biophysics, 2021, 697, 108711.	3.0	4
76	Functional and structural differences between skinned and intact muscle preparations. Journal of General Physiology, 2022, 154, .	1.9	4
77	Myocardial hypertrophy reduces transmural variation in mitochondrial function. Frontiers in Physiology, 2014, 5, 178.	2.8	3
78	No Difference in Myosin Kinetics and Spatial Distribution of the Lever Arm in the Left and Right Ventricles of Human Hearts. Frontiers in Physiology, 2017, 8, 732.	2.8	2
79	Prior Freezing Has Minimal Impact on the Contractile Properties of Permeabilized Human Myocardium. Journal of the American Heart Association, 2022, 11, e023010.	3.7	2
80	<scp>SUMOylation</scp> does not affect cardiac troponin I stability but alters indirectly the development of force in response to Ca²⁺. FEBS Journal, 2022, 289, 6267-6285.	4.7	2
81	Short-range Mechanical Properties Simulated With A Mathematical Model Incorporating Multiple Half-sarcomeres. Biophysical Journal, 2009, 96, 615a.	0.5	1
82	End Systolic Strain Rate, not Afterload, Controls Myocardial Relaxation. Biophysical Journal, 2014, 106, 646a.	0.5	1
83	Myocardial Strain Rate Modulates the Speed of Relaxation in Dynamically Loaded Twitch Contractions. Biophysical Journal, 2015, 108, 200a.	0.5	1
84	Differential Effects of Isoproterenol on Regional Myocardial Mechanics in Rat Using Three-Dimensional Cine DENSE Cardiovascular Magnetic Resonance. Journal of Biomechanical Engineering, 2019, 141, .	1.3	1
85	Distorting the sarcomere. Journal of General Physiology, 2010, 136, 155-157.	1.9	0
86	The Heart by Numbers. Biophysical Journal, 2019, 117, E1-E3.	0.5	0
87	Mathematical modeling of myosin, muscle contraction, and movement. Archives of Biochemistry and Biophysics, 2021, 711, 108979.	3.0	0
88	Antioxidants attenuate TNFâ€Î± induced contractile dysfunction: alterations in myofibrillar function. FASEB Journal, 2006, 20, A809.	0.5	0
89	The Effect of Intracellular pH on Myocardial Calcium Sensitivity in the Anoxiaâ€Tolerant Painted Turtle. FASEB Journal, 2016, 30, 760.22.	0.5	0
90	Differential effects of isoproterenol and omecamtiv mecarbil on the contractile properties of unloaded myocytes. FASEB Journal, 2017, 31, .	0.5	0

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91	Reproducibility of Systolic Strain in Mice Using Cardiac Magnetic Resonance Feature Tracking of Black-Blood Cine Images. Cardiovascular Engineering and Technology, 2022, , 1.	1.6	0
92	An expanding explanation for the ascending limb of muscleâ€™s active force-length relationship. Biophysical Journal, 2022, , .	0.5	0