P Bryant Chase

List of Publications by Year
in descending order

112 papers	3,050 citations	159358 30 h-index	174990 52 g-index
115 all docs	115 docs citations	115 times ranked	2284 citing authors

#	Article	IF	Citations
1	Effects of pH on contraction of rabbit fast and slow skeletal muscle fibers. Biophysical Journal, 1988, 53, 935-946.	0.2	267
2	Age-related changes in rat bone-marrow mesenchymal stem cell plasticity. BMC Cell Biology, 2011, 12, 44.	3.0	141
3	Compliant Realignment of Binding Sites in Muscle: Transient Behavior and Mechanical Tuning. Biophysical Journal, 1998, 74, 1611-1621.	0.2	140
4	Calcium regulation of skeletal muscle thin filament motility in vitro. Biophysical Journal, 1997, 72, 1295-1307.	0.2	113
5	Permeation and interaction of divalent cations in calcium channels of snail neurons.. Journal of General Physiology, 1985, 85, 491-518.	0.9	100
6	Calcium Regulation of Tension Redevelopment Kinetics with 2-Deoxy-ATP or Low [ATP] in Rabbit Skeletal Muscle. Biophysical Journal, 1998, 74, 2005-2015.	0.2	88
7	2-Deoxy-ATP Enhances Contractility of Rat Cardiac Muscle. Circulation Research, 2000, 86, 1211-1217.	2.0	80
8	Thin filament nearâ€neighbour regulatory unit interactions affect rabbit skeletal muscle steadyâ€state forceâ€Ca2+relations. Journal of Physiology, 2002, 540, 485-497.	1.3	78
9	Isometric force redevelopment of skinned muscle fibers from rabbit activated with and without Ca2+. Biophysical Journal, 1994, 67, 1994-2001.	0.2	75
10	Functionalized SnO2 nanobelt field-effect transistor sensors for label-free detection of cardiac troponin. Biosensors and Bioelectronics, 2011, 26, 4538-4544.	5.3	74
11	Effects of inorganic phosphate analogues on stiffness and unloaded shortening of skinned muscle fibres from rabbit.. Journal of Physiology, 1993, 460, 231-246.	1.3	68
12	Familial hypertrophic cardiomyopathy mutations in troponin I (K183Î”, G203S, K206Q) enhance filament sliding. Physiological Genomics, 2003, 14, 117-128.	1.0	65
13	Calcium current activation kinetics in neurones of the snail Lymnaea stagnalis.. Journal of Physiology, 1984, 348, 187-207.	1.3	61
14	A Spatially Explicit Nanomechanical Model of the Half-Sarcomere: Myofilament Compliance Affects Ca2+-Activation. Annals of Biomedical Engineering, 2004, 32, 1559-1568.	1.3	60
15	Enhanced Active Cross-Bridges during Diastole: Molecular Pathogenesis of Tropomyosin's HCM Mutations. Biophysical Journal, 2011, 100, 1014-1023.	0.2	59
16	High-performance liquid chromatographic assays for free and phosphorylated derivatives of the creatine analogues Î²-guanidopropionic acid and 1-carboxymethyl-2-iminoimidazolidine (cyclocreatine). Analytical Biochemistry, 1992, 204, 383-389.	1.1	58
17	Troponin through the looking-glass: emerging roles beyond regulation of striated muscle contraction. Oncotarget, 2018, 9, 1461-1482.	0.8	58
18	Nuclear cardiac troponin and tropomyosin are expressed early in cardiac differentiation of rat mesenchymal stem cells. Differentiation, 2012, 83, 106-115.	1.0	57

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19	Actomyosin-Driven Motility on Patterned Polyelectrolyte Mono- and Multilayers. Nano Letters, 2003, 3, 1505-1509.	4.5	52
20	The structure of the native cardiac thin filament at systolic Ca ²⁺ levels. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	52
21	A Simple Model with Myofilament Compliance Predicts Activation-Dependent Crossbridge Kinetics in Skinned Skeletal Fibers. Biophysical Journal, 2002, 83, 3425-3434.	0.2	48
22	Calmidazolium alters Ca2+ regulation of tension redevelopment rate in skinned skeletal muscle. Biophysical Journal, 1996, 71, 2786-2794.	0.2	46
23	Regulation of Skeletal Muscle Tension Redevelopment by Troponin C Constructs with Different Ca2+ Affinities. Biophysical Journal, 1999, 76, 2664-2672.	0.2	41
24	The Î”14 Mutation of Human Cardiac Troponin T Enhances ATPase Activity and Alters the Cooperative Binding of S1-ADP to Regulated Actinâ€. Biochemistry, 2004, 43, 15276-15285.	1.2	41
25	Unloaded shortening of skinned muscle fibers from rabbit activated with and without Ca2+. Biophysical Journal, 1994, 67, 1984-1993.	0.2	40
26	All-electrical switching and control mechanism for actomyosin-powered nanoactuators. Applied Physics Letters, 2004, 85, 1060-1062.	1.5	39
27	The detection of specific biomolecular interactions with micro-Hall magnetic sensors. Nanotechnology, 2009, 20, 355501.	1.3	38
28	Ca2+ and Cross-Bridge-Induced Changes in Troponin C in Skinned Skeletal Muscle Fibers: Effects of Force Inhibition. Biophysical Journal, 1999, 76, 1480-1493.	0.2	35
29	Activation dependence and kinetics of force and stiffness inhibition by aluminiofluoride, a slowly dissociating analogue of inorganic phosphate, in chemically skinned fibres from rabbit psoas muscle. Journal of Muscle Research and Cell Motility, 1994, 15, 119-129.	0.9	34
30	Ca2+ Regulation of Rabbit Skeletal Muscle Thin Filament Sliding: Role of Cross-Bridge Number. Biophysical Journal, 2003, 85, 1775-1786.	0.2	32
31	Computational simulation of hypertrophic cardiomyopathy mutations in Troponin I: Influence of increased myofilament calcium sensitivity on isometric force, ATPase and [Ca2+]i. Journal of Biomechanics, 2007, 40, 2044-2052.	0.9	31
32	Highly Selective Directed Assembly of Functional Actomyosin on Au Surfaces. Langmuir, 2005, 21, 3213-3216.	1.6	30
33	Tropomyosin Flexural Rigidity and Single Ca2+ Regulatory Unit Dynamics: Implications for Cooperative Regulation of Cardiac Muscle Contraction and Cardiomyocyte Hypertrophy. Frontiers in Physiology, 2012, 3, 80.	1.3	30
34	Meta-analysis of cardiomyopathy-associated variants in troponin genes identifies loci and intragenic hot spots that are associated with worse clinical outcomes. Journal of Molecular and Cellular Cardiology, 2020, 142, 118-125.	0.9	30
35	Nuclear tropomyosin and troponin in striated muscle: new roles in a new locale?. Journal of Muscle Research and Cell Motility, 2013, 34, 275-284.	0.9	29
36	Viscosity and solute dependence of F-actin translocation by rabbit skeletal heavy meromyosin. American Journal of Physiology - Cell Physiology, 2000, 278, C1088-C1098.	2.1	28

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37	Positive Inotropic Effects of Low dATP/ATP Ratios on Mechanics and Kinetics of Porcine Cardiac Muscle. Biophysical Journal, 2006, 91, 2216-2226.	0.2	28
38	Ca2+sensitivity of regulated cardiac thin filament sliding does not depend on myosin isoform. Journal of Physiology, 2006, 577, 935-944.	1.3	28
39	Several cardiomyopathy causing mutations on tropomyosin either destabilize the active state of actomyosin or alter the binding properties of tropomyosin. Biochemical and Biophysical Research Communications, 2011, 406, 74-78.	1.0	28
40	Facilitated Cross-Bridge Interactions with Thin Filaments by Familial Hypertrophic Cardiomyopathy Mutations inÎ±-Tropomyosin. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-12.	3.0	27
41	Structural and functional impact of troponin C-mediated Ca2+ sensitization on myofilament lattice spacing and cross-bridge mechanics in mouse cardiac muscle. Journal of Molecular and Cellular Cardiology, 2018, 123, 26-37.	0.9	27
42	Familial hypertrophic cardiomyopathy related E180G mutation increases flexibility of human cardiac Î±â€tropomyosin. FEBS Letters, 2012, 586, 3503-3507.	1.3	26
43	Persistence Length of Human Cardiac Î±-Tropomyosin Measured by Single Molecule Direct Probe Microscopy. PLoS ONE, 2012, 7, e39676.	1.1	26
44	Effect of Viscosity on Mechanics of Single, Skinned Fibers from Rabbit Psoas Muscle. Biophysical Journal, 1998, 74, 1428-1438.	0.2	25
45	The Cooccurrence of Obesity, Osteoporosis, and Sarcopenia in the Ovariectomized Rat: A Study for Modeling Osteosarcopenic Obesity in Rodents. Journal of Aging Research, 2017, 2017, 1-11.	0.4	25
46	Ca2+-regulatory function of the inhibitory peptide region of cardiac troponin I is aided by the C-terminus of cardiac troponin T: Effects of familial hypertrophic cardiomyopathy mutations cTnI R145G and cTnT R278C, alone and in combination, on filament sliding. Archives of Biochemistry and Biophysics, 2014, 552-553, 11-20.	1.4	24
47	Calcium-independent activation of skeletal muscle fibers by a modified form of cardiac troponin C. Biophysical Journal, 1993, 64, 1632-1637.	0.2	23
48	Thin-filament regulation of force redevelopment kinetics in rabbit skeletal muscle fibres. Journal of Physiology, 2007, 579, 313-326.	1.3	23
49	The intrinsically disordered C terminus of troponin T binds to troponin C to modulate myocardial force generation. Journal of Biological Chemistry, 2019, 294, 20054-20069.	1.6	23
50	Effects of Rapamycin on Cardiac and Skeletal Muscle Contraction and Crossbridge Cycling. Journal of Pharmacology and Experimental Therapeutics, 2005, 312, 12-18.	1.3	20
51	Selective Assembly and Alignment of Actin Filaments with Desired Polarity on Solid Substrates. Langmuir, 2006, 22, 8635-8638.	1.6	20
52	Packaging actomyosin-based biomolecular motor-driven devices for nanoactuator applications. IEEE Transactions on Advanced Packaging, 2005, 28, 556-563.	1.7	19
53	Micromechanical Thermal Assays of Ca2+-Regulated Thin-Filament Function and Modulation by Hypertrophic Cardiomyopathy Mutants of Human Cardiac Troponin. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-13.	3.0	18
54	Faster force transient kinetics at submaximal Ca2+ activation of skinned psoas fibers from rabbit. Biophysical Journal, 1995, 68, 235-242.	0.2	17

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55	Contractile properties of muscle fibers from the deep and superficial digital flexors of horses. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2010, 299, R996-R1005.	0.9	17
56	Interaction Between Troponin and Myosin Enhances Contractile Activity of Myosin in Cardiac Muscle. DNA and Cell Biology, 2011, 30, 653-659.	0.9	17
57	Dimethyl sulphoxide enhances the effects of Pi in myofibrils and inhibits the activity of rabbit skeletal muscle contractile proteins. Biochemical Journal, 2001, 358, 627-636.	1.7	16
58	Hypertrophic Cardiomyopathy Cardiac Troponin C Mutations Differentially Affect Slow Skeletal and Cardiac Muscle Regulation. Frontiers in Physiology, 2017, 8, 221.	1.3	16
59	Dynamic micro-Hall detection of superparamagnetic beads in a microfluidic channel. Journal of Magnetism and Magnetic Materials, 2010, 322, L69-L72.	1.0	15
60	Familial Dilated Cardiomyopathy Associated With a Novel Combination of Compound Heterozygous TNNC1 Variants. Frontiers in Physiology, 2019, 10, 1612.	1.3	15
61	Dimethyl sulphoxide enhances the effects of Pi in myofibrils and inhibits the activity of rabbit skeletal muscle contractile proteins. Biochemical Journal, 2001, 358, 627.	1.7	14
62	Slowed Dynamics of Thin Filament Regulatory Units Reduces Ca2+-Sensitivity of Cardiac Biomechanical Function. Cellular and Molecular Bioengineering, 2013, 6, 183-198.	1.0	13
63	Will you still need me (Ca²⁺, TnT, and DHPR), will you still cleave me (calpain), when I'm 64?. Aging Cell, 2017, 16, 202-204.	3.0	13
64	Fluorescent Protein-Based Ca2+ Sensor Reveals Global, Divalent Cation-Dependent Conformational Changes in Cardiac Troponin C. PLoS ONE, 2016, 11, e0164222.	1.1	13
65	Selective Assembly and Guiding of Actomyosin Using Carbon Nanotube Network Monolayer Patterns. Langmuir, 2007, 23, 9535-9539.	1.6	12
66	Role of cardiac troponin I carboxy terminal mobile domain and linker sequence in regulating cardiac contraction. Archives of Biochemistry and Biophysics, 2016, 601, 80-87.	1.4	12
67	A comprehensive guide to genetic variants and post-translational modifications of cardiac troponin C. Journal of Muscle Research and Cell Motility, 2020, 42, 323-342.	0.9	12
68	Increased intracellular [dATP] enhances cardiac contraction in embryonic chick cardiomyocytes. Journal of Cellular Biochemistry, 2008, 104, 2217-2227.	1.2	11
69	The functional significance of the last 5 residues of the C-terminus of cardiac troponin I. Archives of Biochemistry and Biophysics, 2016, 601, 88-96.	1.4	11
70	Contractile properties of rabbit psoas muscle fibres inhibited by beryllium fluoride. Journal of Muscle Research and Cell Motility, 1999, 20, 425-432.	0.9	10
71	Effects of temperature, ionic strength and pH on the function of skeletal muscle myosin from a eurythermal fish, Fundulus heteroclitus. Journal of Muscle Research and Cell Motility, 2005, 26, 191-197.	0.9	10
72	Post-translational modification patterns on Î²-myosin heavy chain are altered in ischemic and nonischemic human hearts. ELife, 2022, 11, .	2.8	10

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73	Cardiomyocyte nuclearity and ploidy: when is double trouble?. Journal of Muscle Research and Cell Motility, 2020, 41, 329-340.	0.9	9
74	Molecular charge dominates the inhibition of actomyosin in skinned muscle fibers by SH1 peptides. Biophysical Journal, 1991, 60, 352-359.	0.2	8
75	Muscle fatigue and muscle weakness: what we know and what we wish we did. Frontiers in Physiology, 2013, 4, 125.	1.3	8
76	Sexual dimorphism in cardiac transcriptome associated with a troponin C murine model of hypertrophic cardiomyopathy. Physiological Reports, 2020, 8, e14396.	0.7	7
77	Anomalous structural dynamics of minimally frustrated residues in cardiac troponin C triggers hypertrophic cardiomyopathy. Chemical Science, 2021, 12, 7308-7323.	3.7	7
78	Detection of Target ssDNA Using a Microfabricated Hall Magnetometer with Correlated Optical Readout. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-10.	3.0	6
79	Antibody and peptide probes of interactions between the SH1-SH2 region of myosin subfragment 1 and actin's N-terminus. Biochemistry, 1992, 31, 10929-10935.	1.2	5
80	Commentary: Epigenetic Regulation of Phosphodiesterases 2A and 3A Underlies Compromised Î²-Adrenergic Signaling in an iPSC Model of Dilated Cardiomyopathy. Frontiers in Physiology, 2016, 7, 418.	1.3	5
81	Mandibular muscle troponin of the Florida carpenter ant Camponotus floridanus: extending our insights into invertebrate Ca2+ regulation. Journal of Muscle Research and Cell Motility, 2021, 42, 399-417.	0.9	3
82	Systemic delivery of a mitochondria targeted antioxidant partially preserves limb muscle mass and grip strength in response to androgen deprivation. Molecular and Cellular Endocrinology, 2021, 535, 111391.	1.6	3
83	Spatially explicit, nano-mechanical models of the muscle half-sarcomere: Implications for biomechanical tuning in atrophy and fatigue. Acta Astronautica, 2007, 60, 111-118.	1.7	1
84	Tropomyosin in the groove? Molecular insights into an inherited myopathy. Journal of Physiology, 2007, 581, 889-889.	1.3	1
85	Molecular Function of the C-terminal Domain of Cardiac Troponin I. Biophysical Journal, 2010, 98, 357a.	0.2	1
86	Flexibility Change in Human Cardiac Î±-Tropomyosin E180G Mutant: Possible Link to Cardiac Hypertrophy. Biophysical Journal, 2011, 100, 586a.	0.2	1
87	Persistence Length of Human Cardiac Î±-Tropomyosin Implies Near-Neighbor Cooperative Activation of Cardiac Thin Filaments. Biophysical Journal, 2012, 102, 230a.	0.2	1
88	A Dynamic Situation with Uncertainty: Multiscale Modeling of Cardiac Thin-Filament Ca2+ Regulation. Biophysical Journal, 2019, 117, 2241-2243.	0.2	1
89	Elastic domains of giant proteins in striated muscle: Modeling compliance with rulers. Journal of General Physiology, 2019, 151, 619-622.	0.9	1
90	Molecular Motor-Based Assays for Altered Nanomechanical Function of Ca2+-Regulatory Proteins in Cardiomyopathies. Materials Research Society Symposia Proceedings, 2008, 1096, 20201.	0.1	0

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91	Effects of Elevated Solvent Viscosity on Calcium Dependence of Cardiac Myofilament Contractility. Biophysical Journal, 2009, 96, 375a-376a.	0.2	0
92	Mechanical Properties of Human Cardiac Tropomyosin in Familial Hypertrophic Cardiomyopathy (FHC) Probed by Atomic Force Microscopy. Biophysical Journal, 2010, 98, 351a.	0.2	0
93	Bionanotechnology and Nanomedicine. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-1.	3.0	0
94	Human Cardiac Troponin C undergoes Global Conformational Changes in Response to Divalent Cation Binding: Solution Studies of Fluorescent Protein Constructs by FRET and Analytical Ultracentrifugation. Biophysical Journal, 2013, 104, 448a.	0.2	0
95	Frequency dependence of power and its implications for contractile function of muscle fibers from the digital flexors of horses. Physiological Reports, 2014, 2, e12174.	0.7	0
96	Ca2+-Regulatory Function of the Inhibitory Peptide Region of Cardiac Troponin I is Aided by the C-Terminus of Cardiac Troponin T: Effects of FHC Mutations Ctni R145G and Ctnt R278C, Alone and in Combination, on Filament Sliding. Biophysical Journal, 2014, 106, 770a.	0.2	0
97	Simultaneous Measurement of Force and Lattice Spacing in Skinned Cardiac Fibers. Biophysical Journal, 2016, 110, 120a.	0.2	0
98	Thin Filament-Mediated Modulation of Mouse Cardiac Cross-Bridge Kinetics by Ca 2+ -Sensitizing Mutation CTNC-A8V or Bepridil. Biophysical Journal, 2017, 112, 559a.	0.2	0
99	Abnormal Cardiac Cross-Bridge Kinetics in a Troponin T ILE79ASN Transgenic Mouse Model. Biophysical Journal, 2017, 112, 558a-559a.	0.2	0
100	A Novel DCM-Associated Mutation in the N-Helix of Cardiac Troponin C Exhibits Impaired Contractile Kinetics and Reduced Ca 2+ -Sensitivity InÂVitro. Biophysical Journal, 2017, 112, 559a.	0.2	0
101	Clinical and Biophysical Characterization of a Mutation in the N-Helix Region of Cardiac Troponin C: Evidence for an Allosteric Mechanism of Contractile Dysfunction. Biophysical Journal, 2018, 114, 568a.	0.2	0
102	Aberrant Cardiac Muscle Mechanics in a Hypertrophic Cardiomyopathy Troponin T ILE79ASN Transgenic Mouse. Biophysical Journal, 2018, 114, 502a.	0.2	0
103	Cardiac Thin Filament-Mediated Calcium Sensitization Modulates Cross-Bridge Kinetics. Biophysical Journal, 2018, 114, 315a-316a.	0.2	0
104	Thin Filament Regulation Blends Thermodynamic and Mechanical Mechanisms. Biophysical Journal, 2019, 116, 177a-178a.	0.2	0
105	Dynamic and Structural Allosteric Events between the D/E Linker and N-Domain of Cardiac Troponin C Reveal a Novel Mechanism for Cardiac Muscle Regulation. Biophysical Journal, 2019, 116, 488a.	0.2	0
106	Annulment of Cardiac Muscle Length-Dependent Force Activation in Transgenic Mice Bearing the HcTnT-I79N Mutation. Biophysical Journal, 2019, 116, 262a-263a.	0.2	0
107	Mechanical contribution to muscle thin filament activation. Journal of Biological Chemistry, 2020, 295, 15913-15922.	1.6	0
108	Conditional Knock-Out of Cardiac Myosin Light Chain Kinase Ameliorates Hypertrophic Cardiomyopathy Phenotype in a Murine Model. Biophysical Journal, 2021, 120, 343a.	0.2	0

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109	Estrogen replacement prevents ovariectomyâ€induced muscle degradation via lowering local IGFâ€1 production. FASEB Journal, 2013, 27, 852.10.	0.2	0
110	Abstract P417: Cardiomyopathy-associated Variant In Troponin T Tail Domain Promotes Disruption Of Both Frank-starling Mechanism And Cardiac Myofilament Performance. Circulation Research, 2021, 129, .	2.0	0
111	Mechanism(s) of regulation of the cardiac thin filament: new perspectives for a longstanding enigma. Biophysical Journal, 2022, 121, 2a.	0.2	0
112	Human cardiac troponin T amino terminus is required for inhibition and cooperative activation of Ca2+-dependent thin filament sliding. Biophysical Journal, 2022, 121, 37a.	0.2	0