

Sanford I Bernstein

List of Publications by Year in descending order

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102
papers

2,726
citations

159585

30
h-index

214800

47
g-index

106
all docs

106
docs citations

106
times ranked

1906
citing authors

#	ARTICLE	IF	CITATIONS
1	Drosophila muscle myosin heavy chain encoded by a single gene in a cluster of muscle mutations. Nature, 1983, 302, 393-397.	27.8	173
2	Molecular Genetic Analysis of Muscle Development, Structure, and Function in Drosophila. International Review of Cytology, 1993, 143, 63-152.	6.2	165
3	Vinculin network-mediated cytoskeletal remodeling regulates contractile function in the aging heart. Science Translational Medicine, 2015, 7, 292ra99.	12.4	81
4	A Mighty Small Heart: The Cardiac Proteome of Adult Drosophila melanogaster. PLoS ONE, 2011, 6, e18497.	2.5	81
5	Myosin Transducer Mutations Differentially Affect Motor Function, Myofibril Structure, and the Performance of Skeletal and Cardiac Muscles. Molecular Biology of the Cell, 2008, 19, 553-562.	2.1	79
6	Semi-automated Optical Heartbeat Analysis of Small Hearts. Journal of Visualized Experiments, 2009, , .	0.3	76
7	Fine tuning a molecular motor: the location of alternative domains in the Drosophila myosin head. Journal of Molecular Biology, 1997, 271, 1-6.	4.2	75
8	Huntington's Disease Induced Cardiac Amyloidosis Is Reversed by Modulating Protein Folding and Oxidative Stress Pathways in the Drosophila Heart. PLoS Genetics, 2013, 9, e1004024.	3.5	75
9	Alternative Exon-encoded Regions of Drosophila Myosin Heavy Chain Modulate ATPase Rates and Actin Sliding Velocity. Journal of Biological Chemistry, 2001, 276, 15117-15124.	3.4	74
10	The myosin converter domain modulates muscle performance. Nature Cell Biology, 2002, 4, 312-317.	10.3	71
11	Interacting-heads motif has been conserved as a mechanism of myosin II inhibition since before the origin of animals. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E1991-E2000.	7.1	70
12	Spatially and temporally regulated expression of myosin heavy chain alternative exons during Drosophila embryogenesis. Mechanisms of Development, 2001, 101, 35-45.	1.7	68
13	Defects in the Drosophila Myosin Rod Permit Sarcomere Assembly but Cause Flight Muscle Degeneration. Journal of Molecular Biology, 1995, 249, 111-125.	4.2	67
14	Genetic and Biochemical Analysis of Alternative RNA Splicing. Advances in Genetics, 1994, 31, 207-281.	1.8	64
15	Determining structure/function relationships for sarcomeric myosin heavy chain by genetic and transgenic manipulation of Drosophila. Microscopy Research and Technique, 2000, 50, 430-442.	2.2	64
16	The UNC-45 Myosin Chaperone. International Review of Cell and Molecular Biology, 2014, 313, 103-144.	3.2	56
17	β -Crystallin Maintains Skeletal Muscle Myosin Enzymatic Activity and Prevents its Aggregation under Heat-shock Stress. Journal of Molecular Biology, 2006, 358, 635-645.	4.2	54
18	Expression patterns of cardiac aging in <i>Drosophila</i> . Aging Cell, 2017, 16, 82-92.	6.7	50

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19	The UNC-45 Chaperone Is Critical for Establishing Myosin-Based Myofibrillar Organization and Cardiac Contractility in the <i>Drosophila</i> Heart Model. <i>PLoS ONE</i> , 2011, 6, e22579.	2.5	44
20	Specific Myosin Heavy Chain Mutations Suppress Troponin I Defects in <i>Drosophila</i> Muscles. <i>Journal of Cell Biology</i> , 1999, 144, 989-1000.	5.2	41
21	Alternative N-Terminal Regions of <i>Drosophila</i> Myosin Heavy Chain Tune Muscle Kinetics for Optimal Power Output. <i>Biophysical Journal</i> , 2004, 87, 1805-1814.	0.5	40
22	The converter domain modulates kinetic properties of <i>Drosophila</i> myosin. <i>American Journal of Physiology - Cell Physiology</i> , 2003, 284, C1031-C1038.	4.6	39
23	<i>Drosophila</i> UNC-45 accumulates in embryonic blastoderm and in muscles, and is essential for muscle myosin stability. <i>Journal of Cell Science</i> , 2011, 124, 699-705.	2.0	36
24	Kinetic Analysis of <i>Drosophila</i> Muscle Myosin Isoforms Suggests a Novel Mode of Mechanochemical Coupling. <i>Journal of Biological Chemistry</i> , 2003, 278, 50293-50300.	3.4	35
25	An Alternative Domain Near the ATP Binding Pocket of <i>Drosophila</i> Myosin Affects Muscle Fiber Kinetics. <i>Biophysical Journal</i> , 2006, 90, 2427-2435.	0.5	33
26	X-ray Crystal Structure of the UCS Domain-Containing UNC-45 Myosin Chaperone from <i>Drosophila melanogaster</i> . <i>Structure</i> , 2011, 19, 397-408.	3.3	33
27	Control of <i>Drosophila</i> Paramyosin/Miniparamyosin Gene Expression. <i>Journal of Biological Chemistry</i> , 2001, 276, 8278-8287.	3.4	32
28	Paramyosin phosphorylation site disruption affects indirect flight muscle stiffness and power generation in <i>Drosophila melanogaster</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 10522-10527.	7.1	32
29	Alternative S2 Hinge Regions of the Myosin Rod Differentially Affect Muscle Function, Myofibril Dimensions and Myosin Tail Length. <i>Journal of Molecular Biology</i> , 2007, 367, 1312-1329.	4.2	32
30	<i>Drosophila</i> UNC-45 prevents heat-induced aggregation of skeletal muscle myosin and facilitates refolding of citrate synthase. <i>Biochemical and Biophysical Research Communications</i> , 2010, 396, 317-322.	2.1	32
31	Variable N-terminal Regions of Muscle Myosin Heavy Chain Modulate ATPase Rate and Actin Sliding Velocity. <i>Journal of Biological Chemistry</i> , 2003, 278, 17475-17482.	3.4	31
32	Getting Folded: Chaperone Proteins in Muscle Development, Maintenance and Disease. <i>Anatomical Record</i> , 2014, 297, 1637-1649.	1.4	31
33	Profilin modulates sarcomeric organization and mediates cardiomyocyte hypertrophy. <i>Cardiovascular Research</i> , 2016, 110, 238-248.	3.8	31
34	Suboptimal 5' and 3' splice sites regulate alternative splicing of <i>Drosophila melanogaster</i> myosin heavy chain transcripts in vitro. <i>Mechanisms of Development</i> , 1992, 37, 127-140.	1.7	29
35	Genetic approaches to understanding muscle development. <i>Developmental Biology</i> , 1992, 154, 231-244.	2.0	27
36	Measuring passive myocardial stiffness in <i>Drosophila melanogaster</i> to investigate diastolic dysfunction. <i>Journal of Cellular and Molecular Medicine</i> , 2012, 16, 1656-1662.	3.6	27

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37	Alternative Versions of the Myosin Relay Domain Differentially Respond to Load to Influence <i>Drosophila</i> Muscle Kinetics. <i>Biophysical Journal</i> , 2008, 95, 5228-5237.	0.5	26
38	Prolonged cross-bridge binding triggers muscle dysfunction in a <i>Drosophila</i> model of myosin-based hypertrophic cardiomyopathy. <i>ELife</i> , 2018, 7, .	6.0	26
39	A Variable Domain near the ATP-Binding Site in <i>Drosophila</i> Muscle Myosin Is Part of the Communication Pathway between the Nucleotide and Actin-binding Sites. <i>Journal of Molecular Biology</i> , 2007, 368, 1051-1066.	4.2	25
40	The NADPH Metabolic Network Regulates Human β -crystallin Cardiomyopathy and Reductive Stress in <i>Drosophila melanogaster</i> . <i>PLoS Genetics</i> , 2013, 9, e1003544.	3.5	25
41	Alternative Relay Domains of <i>Drosophila melanogaster</i> Myosin Differentially Affect ATPase Activity, in Vitro Motility, Myofibril Structure and Muscle Function. <i>Journal of Molecular Biology</i> , 2008, 379, 443-456.	4.2	24
42	Disrupting the Myosin Converter-Relay Interface Impairs <i>Drosophila</i> Indirect Flight Muscle Performance. <i>Biophysical Journal</i> , 2011, 101, 1114-1122.	0.5	24
43	UCS Proteins: Managing the Myosin Motor. <i>Current Biology</i> , 2003, 13, R525-R527.	3.9	23
44	<i>Drosophila</i> paramyosin is important for myoblast fusion and essential for myofibril formation. <i>Journal of Cell Biology</i> , 2003, 160, 899-908.	5.2	23
45	Isolation and partial characterization of <i>Drosophila</i> myoblasts from primary cultures of embryonic cells.. <i>Journal of Cell Biology</i> , 1978, 78, 856-865.	5.2	22
46	Alternative S2 Hinge Regions of the Myosin Rod Affect Myofibrillar Structure and Myosin Kinetics. <i>Biophysical Journal</i> , 2009, 96, 4132-4143.	0.5	22
47	Developmentally regulated alternative splicing of <i>Drosophila</i> myosin heavy chain transcripts: In vivo analysis of an unusual 3' splice site. <i>Developmental Biology</i> , 1991, 146, 339-344.	2.0	21
48	A Charge Change in an Evolutionarily-conserved Region of the Myosin Globular Head Prevents Myosin and Thick Filament Accumulation in <i>Drosophila</i> . <i>Journal of Molecular Biology</i> , 1994, 236, 697-702.	4.2	20
49	RNA synthesis and coding capacity of polyadenylated and nonpolyadenylated mRNA from cultures of differentiating <i>Drosophila melanogaster</i> myoblasts. <i>Developmental Biology</i> , 1980, 79, 388-398.	2.0	19
50	Alternative Exon 9-Encoded Relay Domains Affect More than One Communication Pathway in the <i>Drosophila</i> Myosin Head. <i>Journal of Molecular Biology</i> , 2009, 389, 707-721.	4.2	18
51	The Relay/Converter Interface Influences Hydrolysis of ATP by Skeletal Muscle Myosin II. <i>Journal of Biological Chemistry</i> , 2016, 291, 1763-1773.	3.4	18
52	Alternative Relay and Converter Domains Tune Native Muscle Myosin Isoform Function in <i>Drosophila</i> . <i>Journal of Molecular Biology</i> , 2012, 416, 543-557.	4.2	17
53	An Alternative Domain Near the Nucleotide-binding Site of <i>Drosophila</i> Muscle Myosin Affects ATPase Kinetics. <i>Journal of Molecular Biology</i> , 2005, 353, 14-25.	4.2	16
54	Transcriptional regulation of the <i>Drosophila melanogaster</i> muscle myosin heavy-chain gene. <i>Gene Expression Patterns</i> , 2007, 7, 413-422.	0.8	16

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55	Myosin storage myopathy mutations yield defective myosin filament assembly in vitro and disrupted myofibrillar structure and function in vivo. <i>Human Molecular Genetics</i> , 2017, 26, 4799-4813.	2.9	16
56	Suppression of myopathic lamin mutations by muscle-specific activation of AMPK and modulation of downstream signaling. <i>Human Molecular Genetics</i> , 2019, 28, 351-371.	2.9	16
57	Expression of the inclusion body myopathy 3 mutation in <i>Drosophila</i> depresses myosin function and stability and recapitulates muscle inclusions and weakness. <i>Molecular Biology of the Cell</i> , 2012, 23, 2057-2065.	2.1	15
58	TRiC/CCT chaperonins are essential for maintaining myofibril organization, cardiac physiological rhythm, and lifespan. <i>FEBS Letters</i> , 2017, 591, 3447-3458.	2.8	15
59	Passive Stiffness in <i>Drosophila</i> Indirect Flight Muscle Reduced by Disrupting Paramyosin Phosphorylation, but Not by Embryonic Myosin S2 Hinge Substitution. <i>Biophysical Journal</i> , 2006, 91, 4500-4506.	0.5	14
60	Introduction to methods in invertebrate muscle biology. <i>Methods</i> , 2012, 56, 1-2.	3.8	14
61	Mapping Interactions between Myosin Relay and Converter Domains That Power Muscle Function. <i>Journal of Biological Chemistry</i> , 2014, 289, 12779-12790.	3.4	14
62	Reductions in ATPase activity, actin sliding velocity, and myofibril stability yield muscle dysfunction in <i>Drosophila</i> models of myosin-based Freeman-Sheldon syndrome. <i>Molecular Biology of the Cell</i> , 2019, 30, 30-41.	2.1	14
63	Mutating the Converter-Relay Interface of <i>Drosophila</i> Myosin Perturbs ATPase Activity, Actin Motility, Myofibril Stability and Flight Ability. <i>Journal of Molecular Biology</i> , 2010, 398, 625-632.	4.2	13
64	Two <i>Drosophila</i> Myosin Transducer Mutants with Distinct Cardiomyopathies Have Divergent ADP and Actin Affinities. <i>Journal of Biological Chemistry</i> , 2011, 286, 28435-28443.	3.4	12
65	Chapter 14 Basic Methods for <i>Drosophila</i> Muscle Biology. <i>Methods in Cell Biology</i> , 1994, 44, 237-258.	1.1	11
66	Overexpression of miniparamyosin causes muscle dysfunction and age-dependant myofibril degeneration in the indirect flight muscles of <i>Drosophila melanogaster</i> . <i>Journal of Muscle Research and Cell Motility</i> , 2001, 22, 287-299.	2.0	11
67	The Role of Evolutionarily Conserved Sequences in Alternative Splicing at the 5' End of <i>Drosophila melanogaster</i> Myosin Heavy Chain RNA. <i>Genetics</i> , 1999, 151, 263-276.	2.9	11
68	Transgenic expression and purification of myosin isoforms using the <i>Drosophila melanogaster</i> indirect flight muscle system. <i>Methods</i> , 2012, 56, 25-32.	3.8	10
69	Structural Basis for Myopathic Defects Engendered by Alterations in the Myosin Rod. <i>Journal of Molecular Biology</i> , 2011, 414, 477-484.	4.2	9
70	The Muscle Mechanical Basis of Freeman-Sheldon Syndrome. <i>Biophysical Journal</i> , 2016, 110, 14a.	0.5	9
71	The R249Q hypertrophic cardiomyopathy myosin mutation decreases contractility in <i>Drosophila</i> by impeding force production. <i>Journal of Physiology</i> , 2019, 597, 2403-2420.	2.9	9
72	A Failure to Communicate. <i>Journal of Biological Chemistry</i> , 2015, 290, 29270-29280.	3.4	8

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73	A Restrictive Cardiomyopathy Mutation in an Invariant Proline at the Myosin Head/Rod Junction Enhances Head Flexibility and Function, Yielding Muscle Defects in <i>Drosophila</i> . <i>Journal of Molecular Biology</i> , 2016, 428, 2446-2461.	4.2	8
74	Myosin dilated cardiomyopathy mutation S532P disrupts actomyosin interactions, leading to altered muscle kinetics, reduced locomotion, and cardiac dilation in <i>Drosophila</i> . <i>Molecular Biology of the Cell</i> , 2021, 32, 1690-1706.	2.1	8
75	Similarities and Differences between Frozen-Hydrated, Rigor Acto-S1 Complexes of Insect Flight and Chicken Skeletal Muscles. <i>Journal of Molecular Biology</i> , 2008, 381, 519-528.	4.2	7
76	Isolation of myoblasts from primary mass cultures of embryonic <i>Drosophila</i> cells. <i>Tissue Culture Association Manual</i> , 1977, 3, 689-690.	0.3	5
77	A <i>Drosophila</i> model of dominant inclusion body myopathy 3 shows diminished myosin kinetics that reduce muscle power and yield myofibrillar defects. <i>DMM Disease Models and Mechanisms</i> , 2017, 10, 761-771.	2.4	5
78	Alternative N-terminal regions of <i>Drosophila</i> myosin heavy chain II regulate communication of the purine binding loop with the essential light chain. <i>Journal of Biological Chemistry</i> , 2020, 295, 14522-14535.	3.4	5
79	Passive stiffness of <i>Drosophila</i> IFM myofibrils: a novel, high accuracy. <i>Journal of Muscle Research and Cell Motility</i> , 2004, 25, 359-366.	2.0	4
80	<i>Drosophila</i> as a potential model to ameliorate mutant Huntington-mediated cardiac amyloidosis. <i>Rare Diseases (Austin, Tex)</i> , 2014, 2, e968003.	1.8	4
81	<i>Drosophila</i> myosin mutants model the disparate severity of type 1 and type 2B distal arthrogryposis and indicate an enhanced actin affinity mechanism. <i>Skeletal Muscle</i> , 2020, 10, 24.	4.2	4
82	Educating the Next Generation of Undergraduate URM Cancer Scientists: Results and Lessons Learned from a Cancer Research Partnership Scholar Program. <i>Journal of Cancer Education</i> , 2021, 36, 406-413.	1.3	4
83	Genetic and transgenic approaches to dissecting muscle development and contractility using the <i>Drosophila</i> model system. <i>Trends in Cardiovascular Medicine</i> , 1994, 4, 243-250.	4.9	3
84	X-ray diffraction from flight muscle with a headless myosin mutation: implications for interpreting reflection patterns. <i>Frontiers in Physiology</i> , 2014, 5, 416.	2.8	3
85	Myosin II Head Interaction in Primitive Species. <i>Biophysical Journal</i> , 2016, 110, 615a.	0.5	3
86	X-ray Crystallographic and Molecular Dynamic Analyses of <i>Drosophila melanogaster</i> Embryonic Muscle Myosin Define Domains Responsible for Isoform-Specific Properties. <i>Journal of Molecular Biology</i> , 2020, 432, 427-447.	4.2	3
87	Prolonged myosin binding increases muscle stiffness in <i>Drosophila</i> models of Freeman-Sheldon syndrome. <i>Biophysical Journal</i> , 2021, 120, 844-854.	0.5	2
88	A <i>Drosophila</i> Model of Myosin-Based Inclusion Body Myopathy Type 3: Effects on Muscle Structure, Muscle Function and Aggregated Protein Profiles. <i>Biophysical Journal</i> , 2015, 108, 304a.	0.5	1
89	The R369 Myosin Residue within Loop 4 Is Critical for Actin Binding and Muscle Function in <i>Drosophila</i> . <i>International Journal of Molecular Sciences</i> , 2022, 23, 2533.	4.1	1
90	An Integrative Analysis of the Muscle Myosin Motor Using Genetic and Transgenic Tools. <i>Biophysical Journal</i> , 2009, 96, 554a.	0.5	0

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91	Transgenic Replacement of the Myosin S2/hmm Hinge Alters the Rod's Nano-Mechanical Properties and Affects Sarcomeric Organization. <i>Biophysical Journal</i> , 2010, 98, 543a.	0.5	0
92	Converter Domain Residue R759 Interaction with Relay Loop Residue N509 in <i>Drosophila</i> Muscle Myosin is Critical for Motor Function, Myofibril Stability and Flight Ability. <i>Biophysical Journal</i> , 2010, 98, 215a.	0.5	0
93	Myosin-Based Inclusion Body Myopathy Type 3 Decreases Muscle Power Generation and Kinetics. <i>Biophysical Journal</i> , 2010, 98, 544a.	0.5	0
94	Interaction Between the Relay Loop and the SH1-SH2 Helix Region in <i>Drosophila</i> Muscle Myosin is Essential for Normal Motor Function, Myofibril Stability and Muscle Contraction. <i>Biophysical Journal</i> , 2012, 102, 148a-149a.	0.5	0
95	Myosin Storage Myopathy Mutations Cause Age Dependent Muscle Degeneration and Cardiac Dysfunction in a <i>Drosophila</i> Model. <i>Biophysical Journal</i> , 2012, 102, 253a-254a.	0.5	0
96	Exploration and Suppression of Cardiac Amyloidosis Induced by Huntington's Disease-Causing Amyloid in the <i>Drosophila</i> Heart Model. <i>Biophysical Journal</i> , 2012, 102, 351a.	0.5	0
97	Vinculin-Mediated Cytoskeletal Remodeling Modulates Cardiac Morphology and Contractile Function During Ageing. <i>Biophysical Journal</i> , 2014, 106, 778a.	0.5	0
98	Myosin Storage Myopathy Mutations Disrupt Myofibrillar Assembly/ Stability and Cause Progressive Muscle Degeneration in a <i>Drosophila</i> Model. <i>Biophysical Journal</i> , 2014, 106, 777a.	0.5	0
99	Expression of Myosin Storage Myopathy Mutations in <i>Drosophila</i> Disrupts Muscle Function, Myofibrillar Structure and Causes Defects in Thick Filament Assembly. <i>Biophysical Journal</i> , 2017, 112, 117a.	0.5	0
100	Structural and Biochemical Mechanisms of Myosin-Induced Dilated Cardiomyopathy. <i>Biophysical Journal</i> , 2018, 114, 383a.	0.5	0
101	<i>Drosophila</i> UNC-45 accumulates in embryonic blastoderm and in muscles, and is essential for muscle myosin stability. <i>Development (Cambridge)</i> , 2011, 138, e1-e1.	2.5	0
102	Cardiac amyloidosis and its suppression in a Huntington's disease model in the <i>Drosophila</i> heart. <i>FASEB Journal</i> , 2012, 26, 1135.6.	0.5	0