James R Sellers

List of Publications by Year
in descending order

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126 papers	13,060 citations	30070 54 h-index	24982 109 g-index
143 all docs	143 docs citations	143 times ranked	9943 citing authors

#	Article	IF	Citations
1	Dissecting Temporal and Spatial Control of Cytokinesis with a Myosin II Inhibitor. Science, 2003, 299, 1743-1747.	12.6	1,259
2	Mechanism of Blebbistatin Inhibition of Myosin II. Journal of Biological Chemistry, 2004, 279, 35557-35563.	3.4	839
3	Myosins: a diverse superfamily. Biochimica Et Biophysica Acta - Molecular Cell Research, 2000, 1496, 3-22.	4.1	676
4	Mutations in either the essential or regulatory light chains of myosin are associated with a rare myopathy in human heart and skeletal muscle. Nature Genetics, 1996, 13, 63-69.	21.4	559
5	Quantitative mass imaging of single biological macromolecules. Science, 2018, 360, 423-427.	12.6	453
6	Identification of an organelle receptor for myosin-Va. Nature Cell Biology, 2002, 4, 271-278.	10.3	419
7	The gated gait of the processive molecular motor, myosin V. Nature Cell Biology, 2002, 4, 59-65.	10.3	360
8	Specificity of blebbistatin, an inhibitor of myosin II. Journal of Muscle Research and Cell Motility, 2004, 25, 337-341.	2.0	342
9	Myosin-XVa is required for tip localization of whirlin and differential elongation of hair-cell stereocilia. Nature Cell Biology, 2005, 7, 148-156.	10.3	313
10	Two-headed binding of a processive myosin to F-actin. Nature, 2000, 405, 804-807.	27.8	295
11	Identification and Characterization of Nonmuscle Myosin II-C, a New Member of the Myosin II Family. Journal of Biological Chemistry, 2004, 279, 2800-2808.	3.4	286
12	Walking to work: roles for class V myosins as cargo transporters. Nature Reviews Molecular Cell Biology, 2012, 13, 13-26.	37.0	266
13	Load-dependent kinetics of myosin-V can explain its high processivity. Nature Cell Biology, 2005, 7, 861-869.	10.3	247
14	Kinetic Tuning of Myosin via a Flexible Loop Adjacent to the Nucleotide Binding Pocket. Journal of Biological Chemistry, 1998, 273, 6262-6270.	3.4	228
15	Kinetic Mechanism of Non-muscle Myosin IIB. Journal of Biological Chemistry, 2003, 278, 27439-27448.	3.4	223
16	Functional Divergence of Human Cytoplasmic Myosin II. Journal of Biological Chemistry, 2003, 278, 38132-38140.	3.4	221
17	Load-dependent mechanism of nonmuscle myosin 2. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9994-9999.	7.1	196
18	Regulation of cytoplasmic and smooth muscle myosin. Current Opinion in Cell Biology, 1991, 3, 98-104.	5.4	193

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19	Actin-Bundling Protein TRIOBP Forms Resilient Rootlets of Hair Cell Stereocilia Essential for Hearing. Cell, 2010, 141, 786-798.	28.9	167
20	Characterization of Three Full-length Human Nonmuscle Myosin II Paralogs. Journal of Biological Chemistry, 2013, 288, 33398-33410.	3.4	167
21	The cargo-binding domain regulates structure and activity of myosinâ€‰5. Nature, 2006, 442, 212-215.	27.8	159
22	Characterization of the Human and Mouse Unconventional Myosin XV Genes Responsible for Hereditary Deafness DFNB3 and Shaker 2. Genomics, 1999, 61, 243-258.	2.9	153
23	Rab27a Is an Essential Component of Melanosome Receptor for Myosin Va. Molecular Biology of the Cell, 2002, 13, 1735-1749.	2.1	153
24	Regulated Conformation of Myosin V. Journal of Biological Chemistry, 2004, 279, 2333-2336.	3.4	150
25	Walking with myosin V. Current Opinion in Cell Biology, 2006, 18, 68-73.	5.4	143
26	Neck Length and Processivity of Myosin V. Journal of Biological Chemistry, 2003, 278, 29201-29207.	3.4	139
27	The Predicted Coiled-coil Domain of Myosin 10 Forms a Novel Elongated Domain That Lengthens the Head. Journal of Biological Chemistry, 2005, 280, 34702-34708.	3.4	139
28	Direct observation of the mechanochemical coupling in myosin Va during processive movement. Nature, 2008, 455, 128-132.	27.8	133
29	Effect of ADP and Ionic Strength on the Kinetic and Motile Properties of Recombinant Mouse Myosin V. Journal of Biological Chemistry, 2000, 275, 4329-4335.	3.4	132
30	The in vitro motility activity of beta-cardiac myosin depends on the nature of the beta-myosin heavy chain gene mutation in hypertrophic cardiomyopathy. Journal of Muscle Research and Cell Motility, 1997, 18, 275-283.	2.0	125
31	The prepower stroke conformation of myosin V. Journal of Cell Biology, 2002, 159, 983-991.	5.2	123
32	Disease-associated Mutations and Alternative Splicing Alter the Enzymatic and Motile Activity of Nonmuscle Myosins II-B and II-C. Journal of Biological Chemistry, 2005, 280, 22769-22775.	3.4	114
33	Myosin light chains: Teaching old dogs new tricks. Bioarchitecture, 2014, 4, 169-188.	1.5	113
34	Various Themes of Myosin Regulation. Journal of Molecular Biology, 2016, 428, 1927-1946.	4.2	112
35	Unconventional myosins and the genetics of hearing loss. , 1999, 89, 147-157.		105
36	Binding of gizzard smooth muscle myosin subfragment-1 to actin in the presence and absence of adenosine 5'-triphosphate. Biochemistry, 1983, 22, 530-535.	2.5	104

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37	Nanometer Localization of Single Green Fluorescent Proteins: Evidence that Myosin V Walks Hand-Over-Hand via Telemark Configuration. Biophysical Journal, 2004, 87, 1776-1783.	0.5	96
38	Hybrid formation between scallop myofibrils and foreign regulatory light-chains. Journal of Molecular Biology, 1980, 144, 223-245.	4.2	95
39	A FERM domain autoregulates Drosophila myosin 7a activity. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4189-4194.	7.1	92
40	Step-Size Is Determined by Neck Length in Myosin Vâ€. Biochemistry, 2005, 44, 16203-16210.	2.5	91
41	Myosin 18A Coassembles with Nonmuscle Myosin 2 to Form Mixed Bipolar Filaments. Current Biology, 2015, 25, 942-948.	3.9	83
42	Kinetic Adaptations of Myosins for Their Diverse Cellular Functions. Traffic, 2016, 17, 839-859.	2.7	83
43	Effect of Mts1 on the Structure and Activity of Nonmuscle Myosin II. Biochemistry, 1997, 36, 16321-16327.	2.5	81
44	Direct observation of the myosin-Va power stroke and its reversal. Nature Structural and Molecular Biology, 2010, 17, 590-595.	8.2	81
45	Structural dynamics of myosin 5 during processive motion revealed by interferometric scattering microscopy. ELife, 2015, 4, .	6.0	80
46	Chapter 2 Myosin-Specific Adaptations of the Motility Assay. Methods in Cell Biology, 1993, 39, 23-49.	1.1	75
47	Myosin-I nomenclature. Journal of Cell Biology, 2001, 155, 703-704.	5.2	71
48	The SAH domain extends the functional length of the myosin lever. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22193-22198.	7.1	70
49	Chaperone-enhanced purification of unconventional myosin 15, a molecular motor specialized for stereocilia protein trafficking. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12390-12395.	7.1	69
50	In vitro functional characterization of bacterially expressed human fibroblast tropomyosin isoforms and their chimeric mutants. Cytoskeleton, 1993, 26, 248-261.	4.4	68
51	Baculovirus Expression of Chicken Nonmuscle Heavy Meromyosin II-B. Journal of Biological Chemistry, 1996, 271, 2689-2695.	3.4	68
52	Mammalian Myosin-18A, a Highly Divergent Myosin. Journal of Biological Chemistry, 2013, 288, 9532-9548.	3.4	65
53	Kinetic Characterization of Nonmuscle Myosin IIB at the Single Molecule Level. Journal of Biological Chemistry, 2013, 288, 709-722.	3.4	65
54	A Conserved Negatively Charged Amino Acid Modulates Function in Human Nonmuscle Myosin IIA. Biochemistry, 2000, 39, 5555-5560.	2.5	64

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55	Myosin Regulatory Light Chain (RLC) Phosphorylation Change as a Modulator of Cardiac Muscle Contraction in Disease. Journal of Biological Chemistry, 2013, 288, 13446-13454.	3.4	63
56	Dimerized Drosophila myosin VIIa: A processive motor. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5746-5751.	7.1	60
57	Bipolar filaments of human nonmuscle myosin 2-A and 2-B have distinct motile and mechanical properties. ELife, 2018, 7, .	6.0	54
58	The formin inhibitor SMIFH2 inhibits members of the myosin superfamily. Journal of Cell Science, 2021, 134, .	2.0	54
59	In vitro reconstitution of a transport complex containing Rab27a, melanophilin and myosin Va. FEBS Letters, 2006, 580, 5863-5868.	2.8	51
60	Kinetics of ADP Dissociation from the Trail and Lead Heads of Actomyosin V following the Power Stroke. Journal of Biological Chemistry, 2008, 283, 766-773.	3.4	50
61	Drosophila non-muscle myosin II motor activity determines the rate of tissue folding. ELife, 2016, 5, .	6.0	50
62	Local pulsatile contractions are an intrinsic property of the myosin 2A motor in the cortical cytoskeleton of adherent cells. Molecular Biology of the Cell, 2017, 28, 240-251.	2.1	48
63	Actin-binding proteins regulate the work performed by myosin II motors on single actin filaments. Cytoskeleton, 1992, 22, 274-280.	4.4	46
64	A Myosin III fromLimulusEyes Is a Clock-Regulated Phosphoprotein. Journal of Neuroscience, 1998, 18, 4548-4559.	3.6	46
65	Myosin V from Drosophila Reveals Diversity of Motor Mechanisms within the Myosin V Family. Journal of Biological Chemistry, 2005, 280, 30594-30603.	3.4	46
66	Absolute Stereochemical Assignment and Fluorescence Tuning of the Small Molecule Tool, (-)-Blebbistatin. European Journal of Organic Chemistry, 2005, 2005, 1736-1740.	2.4	45
67	Myosin-10 produces its power-stroke in two phases and moves processively along a single actin filament under low load. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1833-42.	7.1	45
68	Human Myosin Vc Is a Low Duty Ratio, Nonprocessive Molecular Motor. Journal of Biological Chemistry, 2008, 283, 8527-8537.	3.4	44
69	Regulation of Nonmuscle Myosin II by Tropomyosin. Biochemistry, 2014, 53, 4015-4024.	2.5	43
70	Influence of lever structure on myosin 5a walking. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2509-2514.	7.1	42
71	Mechanism of Action of Myosin X, a Membrane-associated Molecular Motor. Journal of Biological Chemistry, 2005, 280, 15071-15083.	3.4	40
72	Switch 1 Mutation S217A Converts Myosin V into a Low Duty Ratio Motor. Journal of Biological Chemistry, 2009, 284, 2138-2149.	3.4	40

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73	Affimer proteins for F-actin: novel affinity reagents that label F-actin in live and fixed cells. Scientific Reports, 2018, 8, 6572.	3.3	38
74	Folding and regulation in myosins II and V. Journal of Muscle Research and Cell Motility, 2007, 28, 363-370.	2.0	37
75	Competition between kinesin-1 and myosin-V defines Drosophila posterior determination. ELife, 2020, 9, .	6.0	36
76	Unique sequence of a high molecular weight myosin light chain kinase is involved in interaction with actin cytoskeleton. FEBS Letters, 1999, 463, 67-71.	2.8	35
77	Phosphorylation-dependent Regulation Is Absent in a Nonmuscle Heavy Meromyosin Construct with One Complete Head and One Head Lacking the Motor Domain. Journal of Biological Chemistry, 2001, 276, 41465-41472.	3.4	35
78	Catalytic fragment of protein kinase C exhibits altered substrate specificity toward smooth muscle myosin light chain. FEBS Letters, 1991, 294, 144-148.	2.8	33
79	An Alternatively Spliced Isoform of Non-muscle Myosin II-C Is Not Regulated by Myosin Light Chain Phosphorylation. Journal of Biological Chemistry, 2009, 284, 11563-11571.	3.4	31
80	To understand muscle you must take it apart. Frontiers in Physiology, 2014, 5, 90.	2.8	31
81	Calcium and cargoes as regulators of myosin 5a activity. Biochemical and Biophysical Research Communications, 2008, 369, 176-181.	2.1	30
82	Mammalian Nonmuscle Myosin II Binds to Anionic Phospholipids with Concomitant Dissociation of the Regulatory Light Chain. Journal of Biological Chemistry, 2016, 291, 24828-24837.	3.4	30
83	The amino acid sequence of the light chain of Acanthamoeba myosin IC. Journal of Muscle Research and Cell Motility, 1997, 18, 395-398.	2.0	29
84	Drosophila melanogaster Myosin-18 Represents a Highly Divergent Motor with Actin Tethering Properties. Journal of Biological Chemistry, 2011, 286, 21755-21766.	3.4	28
85	Dissecting myosin-5B mechanosensitivity and calcium regulation at the single molecule level. Nature Communications, 2018, 9, 2844.	12.8	28
86	Preparation and characterization of heavy meromyosin and subfragment 1 from vertebrate cytoplasmic myosins. Biochemistry, 1988, 27, 6977-6982.	2.5	27
87	Kinetic Mechanism of MyosinV-S1 Using a New Fluorescent ATP Analogueâ€. Biochemistry, 2006, 45, 13035-13045.	2.5	27
88	Kinetic characterization of the sole nonmuscle myosinâ€2 from the model organism Drosophila melanogaster. FASEB Journal, 2015, 29, 1456-1466.	0.5	26
89	Effect of ATP and regulatory light-chain phosphorylation on the polymerization of mammalian nonmuscle myosin II. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6516-E6525.	7.1	26
90	Megakaryocyte migration defects due to nonmuscle myosin IIA mutations underlie thrombocytopenia in MYH9-related disease. Blood, 2020, 135, 1887-1898.	1.4	26

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91	The Mechanism of Regulation of Smooth Muscle Myosin by Phosphorylation. Current Topics in Cellular Regulation, 1985, 27, 51-62.	9.6	25
92	Nonmuscle myosin IIA with a GFP fused to the N-terminus of the regulatory light chain is regulated normally. Journal of Muscle Research and Cell Motility, 2010, 31, 163-170.	2.0	24
93	<scp>R</scp>eâ€evaluating the roles of myosin 18Aî± and Fâ€actin in determining Golgi morphology. Cytoskeleton, 2017, 74, 205-218.	2.0	23
94	The B2 alternatively spliced isoform of nonmuscle myosin II-B lacks actin-activated MgATPase activity and in vitro motility. Biochemical and Biophysical Research Communications, 2008, 369, 124-134.	2.1	22
95	Mechanistic insights into the active site and allosteric communication pathways in human nonmuscle myosin-2C. ELife, 2017, 6, .	6.0	22
96	Human myosin XVBP is a transcribed pseudogene. Journal of Muscle Research and Cell Motility, 2001, 22, 477-483.	2.0	21
97	The Kinetic Mechanism of Mouse Myosin VIIA. Journal of Biological Chemistry, 2011, 286, 8819-8828.	3.4	21
98	Four things to know about myosin light chains as reporters for nonâ€muscle myosinâ€2 dynamics in live cells. Cytoskeleton, 2015, 72, 65-70.	2.0	18
99	Kinetic signatures of myosin-5B, the motor involved in microvillus inclusion disease. Journal of Biological Chemistry, 2017, 292, 18372-18385.	3.4	18
100	Tyrosine Phosphorylation of the Myosin Regulatory Light Chain Controls Non-muscle Myosin II Assembly and Function in Migrating Cells. Current Biology, 2020, 30, 2446-2458.e6.	3.9	18
101	A binding protein regulates myosin-7a dimerization and actin bundle assembly. Nature Communications, 2021, 12, 563.	12.8	18
102	Fifty years of contractility research post sliding filament hypothesis. Journal of Muscle Research and Cell Motility, 2004, 25, 475-482.	2.0	17
103	Actin Structure-Dependent Stepping of Myosin 5a and 10 during Processive Movement. PLoS ONE, 2013, 8, e74936.	2.5	17
104	Ankyrin domain of myosin 16 influences motor function and decreases protein phosphatase catalytic activity. European Biophysics Journal, 2015, 44, 207-218.	2.2	16
105	Self-organization of actin networks by a monomeric myosin. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E8387-E8395.	7.1	14
106	Trifluoperazine inhibits the MgATPase activity and in vitro motility of conventional and unconventional myosins. Journal of Muscle Research and Cell Motility, 2003, 24, 579-585.	2.0	12
107	Functional adaptation of the switchâ€2 nucleotide sensor enables rapid processive translocation by myosinâ€5. FASEB Journal, 2010, 24, 4480-4490.	0.5	12
108	The ATPase mechanism of myosin 15, the molecular motor mutated in DFNB3 human deafness. Journal of Biological Chemistry, 2021, 296, 100243.	3.4	12

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109	Multiple S100 protein isoforms and C-terminal phosphorylation contribute to the paralog-selective regulation of nonmuscle myosin 2 filaments. Journal of Biological Chemistry, 2018, 293, 14850-14867.	3.4	11
110	In Vitro Motility Assay to Study Translocation of Actin by Myosin. Current Protocols in Cell Biology, 1998, 00, Unit 13.2.	2.3	10
111	The use of native thick filaments in in vitro motility assays. Journal of Cell Science, 1991, 1991, 67-71.	2.0	9
112	Extensibility of the Extended Tail Domain of Processive and Nonprocessive Myosin V Molecules. Biophysical Journal, 2009, 97, 3123-3131.	0.5	9
113	Kinetic Characterization of the ATPase and Actin-activated ATPase Activities of Acanthamoeba castellanii Myosin-2. Journal of Biological Chemistry, 2013, 288, 26709-26720.	3.4	8
114	Myosin V. , 2008, , 289-323.		7
115	A Semi-High-Throughput Adaptation of the NADH-Coupled ATPase Assay for Screening Small Molecule Inhibitors. Journal of Visualized Experiments, 2019, , .	0.3	6
116	Perfringolysin O-Induced Plasma Membrane Pores Trigger Actomyosin Remodeling and Endoplasmic Reticulum Redistribution. Toxins, 2019, 11, 419.	3.4	6
117	Kinesin and NCD, two structural cousins of myosin. Journal of Muscle Research and Cell Motility, 1996, 17, 173-175.	2.0	5
118	Use of Fluorescent Techniques to Study the In Vitro Movement of Myosins. Exs, 2014, 105, 193-210.	1.4	4
119	Regulation of myosin 5a and myosin 7a. Biochemical Society Transactions, 2011, 39, 1136-1141.	3.4	3
120	How Myosin 5 Walks Deduced from Single-Molecule Biophysical Approaches. Advances in Experimental Medicine and Biology, 2020, 1239, 153-181.	1.6	3
121	Dynein struts its stuff. Nature Structural and Molecular Biology, 2011, 18, 635-636.	8.2	2
122	Myosin-Specific Adaptations of In vitro Fluorescence Microscopy-Based Motility Assays. Journal of Visualized Experiments, 2021, , .	0.3	2
123	Discovery of Selective Inhibitors for In Vitro and In Vivo Interrogation of Skeletal Myosin II. ACS Chemical Biology, 2021, 16, 2164-2173.	3.4	2
124	Mechanisms and Functional Diversity of Macromolecular Remodeling by ATP-Dependent Motors. Journal of Molecular Biology, 2016, 428, 1819-1821.	4.2	0
125	Cover Image, Volume 74, Issue 5. Cytoskeleton, 2017, 74, C1-C1.	2.0	0
126	Cover Image, Volume 74, Issue 5. Cytoskeleton, 2017, 74, C4-C4.	2.0	0