

# Roger Craig

## List of Publications by Year in descending order

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118  
papers

7,841  
citations

41344

49  
h-index

53230

85  
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120  
all docs

120  
docs citations

120  
times ranked

3300  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interacting-heads motif explains the X-ray diffraction pattern of relaxed vertebrate skeletal muscle. Biophysical Journal, 2022, 121, 1354-1366.	0.5	9
2	Structural basis of the super- and hyper-relaxed states of myosin II. Journal of General Physiology, 2022, 154, .	1.9	46
3	Relaxed tarantula skeletal muscle has two ATP energy-saving mechanisms. Journal of General Physiology, 2021, 153, .	1.9	13
4	The N terminus of myosin-binding protein C extends toward actin filaments in intact cardiac muscle. Journal of General Physiology, 2021, 153, .	1.9	30
5	Fast skeletal myosin-binding protein-C regulates fast skeletal muscle contraction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	19
6	Amino terminus of cardiac myosin binding protein-C regulates cardiac contractility. Journal of Molecular and Cellular Cardiology, 2021, 156, 33-44.	1.9	17
7	The mesa trail and the interacting heads motif of myosin II. Archives of Biochemistry and Biophysics, 2020, 680, 108228.	3.0	16
8	Cryo-EM structure of the inhibited (10S) form of myosin II. Nature, 2020, 588, 521-525.	27.8	59
9	The myosin interacting-heads motif present in live tarantula muscle explains tetanic and posttetanic phosphorylation mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11865-11874.	7.1	35
10	The central role of the tail in switching off 10S myosin II activity. Journal of General Physiology, 2019, 151, 1081-1093.	1.9	15
11	Lattice arrangement of myosin filaments correlates with fiber type in rat skeletal muscle. Journal of General Physiology, 2019, 151, 1404-1412.	1.9	12
12	Resolving the Actin Lattice and Identifying the Relative Position of MYBP-C's N-Terminus in Cardiac Muscle using Storm Microscopy. Biophysical Journal, 2019, 116, 116a.	0.5	0
13	Altered C10 domain in cardiac myosin binding protein-C results in hypertrophic cardiomyopathy. Cardiovascular Research, 2019, 115, 1986-1997.	3.8	19
14	Getting into the thick (and thin) of it. Journal of General Physiology, 2019, 151, 610-613.	1.9	15
15	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
16	Skeletal myosin binding protein-C isoforms regulate thin filament activity in a Ca <sup>2+</sup> -dependent manner. Scientific Reports, 2018, 8, 2604.	3.3	38
17	Phosphorylation of cardiac myosin binding protein C releases myosin heads from the surface of cardiac thick filaments. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1355-E1364.	7.1	67
18	Molecular Structure of Muscle Filaments Determined by Electron Microscopy. Applied Microscopy, 2017, 47, 226-232.	1.4	6

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19	An approach to improve the resolution of helical filaments with a large axial rise and flexible subunits. <i>Journal of Structural Biology</i> , 2016, 193, 45-54.	2.8	18
20	Phosphorylation and Calcium Antagonistically Tune Myosin-Binding Protein C's Molecular Structure and Function. <i>Biophysical Journal</i> , 2016, 110, 293a.	0.5	1
21	Myosin II Head Interaction in Primitive Species. <i>Biophysical Journal</i> , 2016, 110, 615a.	0.5	3
22	The cMyBP-C HCM variant L348P enhances thin filament activation through an increased shift in tropomyosin position. <i>Journal of Molecular and Cellular Cardiology</i> , 2016, 91, 141-147.	1.9	19
23	Phosphorylation and calcium antagonistically tune myosin-binding protein C's structure and function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3239-3244.	7.1	84
24	Pacemaker-induced transient asynchrony suppresses heart failure progression. <i>Science Translational Medicine</i> , 2015, 7, 319ra207.	12.4	31
25	The Inhibited, Interacting-Heads Motif Characterizes Myosin II from the Earliest Animals with Muscles. <i>Biophysical Journal</i> , 2015, 108, 301a.	0.5	4
26	Orientation of Myosin Binding Protein C in the Cardiac Muscle Sarcomere Determined by Domain-Specific Immuno-EM. <i>Journal of Molecular Biology</i> , 2015, 427, 274-286.	4.2	43
27	Myosin-binding protein C corrects an intrinsic inhomogeneity in cardiac excitation-contraction coupling. <i>Science Advances</i> , 2015, 1, .	10.3	69
28	Through Thick and Thin—Interfilament Communication in Muscle. <i>Biophysical Journal</i> , 2015, 109, 665-667.	0.5	11
29	An invertebrate smooth muscle with striated muscle myosin filaments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E5660-8.	7.1	52
30	Three-Dimensional Organization of Troponin on Cardiac Muscle Thin Filaments in the Relaxed State. <i>Biophysical Journal</i> , 2014, 106, 855-864.	0.5	46
31	Myosin-binding protein C displaces tropomyosin to activate cardiac thin filaments and governs their speed by an independent mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 2170-2175.	7.1	127
32	Structure, sarcomeric organization, and thin filament binding of cardiac myosin-binding protein-C. <i>Pflügers Archiv European Journal of Physiology</i> , 2014, 466, 425-431.	2.8	44
33	Different Head Environments in Tarantula Thick Filaments Support a Cooperative Activation Process. <i>Biophysical Journal</i> , 2013, 105, 2114-2122.	0.5	22
34	Specific Charged Residues on the Myosin Heavy Chain (K368 and R406) Contribute to Head Interaction of Relaxed Smooth Muscle Myosin. <i>Biophysical Journal</i> , 2013, 104, 452a.	0.5	0
35	Structural basis of the relaxed state of a Ca <sup>2+</sup> -regulated myosin filament and its evolutionary implications. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 8561-8566.	7.1	48
36	Cardiac Myosin Binding Protein-C Plays No Regulatory Role in Skeletal Muscle Structure and Function. <i>PLoS ONE</i> , 2013, 8, e69671.	2.5	32

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37	Isolation, electron microscopy and 3D reconstruction of invertebrate muscle myofilaments. <i>Methods</i> , 2012, 56, 33-43.	3.8	9
38	Tropomyosin Position on F-Actin Revealed by EM Reconstruction and Computational Chemistry. <i>Biophysical Journal</i> , 2011, 100, 1005-1013.	0.5	147
39	Mechanism of the Ca <sup>2+</sup> -Dependent Interaction between S100A4 and Tail Fragments of Nonmuscle Myosin Heavy Chain IIA. <i>Journal of Molecular Biology</i> , 2011, 405, 1004-1026.	4.2	35
40	Electron Microscopy and 3D Reconstruction of F-Actin Decorated with Cardiac Myosin-Binding Protein C (cMyBP-C). <i>Journal of Molecular Biology</i> , 2011, 410, 214-225.	4.2	67
41	A Molecular Model of Phosphorylation-Based Activation and Potentiation of Tarantula Muscle Thick Filaments. <i>Journal of Molecular Biology</i> , 2011, 414, 44-61.	4.2	61
42	Modulation of striated muscle contraction by binding of myosin binding protein C to actin. <i>Bioarchitecture</i> , 2011, 1, 277-283.	1.5	16
43	Direct visualization of myosin-binding protein C bridging myosin and actin filaments in intact muscle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 11423-11428.	7.1	159
44	The C Terminus of Cardiac Troponin I Stabilizes the Ca <sup>2+</sup> -Activated State of Tropomyosin on Actin Filaments. <i>Circulation Research</i> , 2010, 106, 705-711.	4.5	55
45	Electron microscopy and three-dimensional reconstruction of native thin filaments reveal species-specific differences in regulatory strand densities. <i>Biochemical and Biophysical Research Communications</i> , 2010, 391, 193-197.	2.1	2
46	The tail binds to the head's "neck domain, inhibiting ATPase activity of myosin VIIA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 8483-8488.	7.1	78
47	Analysis of tarantula skeletal muscle protein sequences and identification of transcriptional isoforms. <i>BMC Genomics</i> , 2009, 10, 117.	2.8	23
48	Head's "Head Interaction Characterizes the Relaxed State of Limulus Muscle Myosin Filaments. <i>Journal of Molecular Biology</i> , 2009, 385, 423-431.	4.2	68
49	Structural Basis for the Activation of Muscle Contraction by Troponin and Tropomyosin. <i>Journal of Molecular Biology</i> , 2009, 388, 673-681.	4.2	77
50	Blebbistatin Stabilizes the Helical Order of Myosin Filaments by Promoting the Switch 2 Closed State. <i>Biophysical Journal</i> , 2008, 95, 3322-3329.	0.5	47
51	Structural Basis for the Regulation of Muscle Contraction by Troponin and Tropomyosin. <i>Journal of Molecular Biology</i> , 2008, 379, 929-935.	4.2	152
52	Millisecond Time-Resolved Changes Occurring in Ca <sup>2+</sup> -Regulated Myosin Filaments upon Relaxation. <i>Journal of Molecular Biology</i> , 2008, 381, 256-260.	4.2	9
53	Ca <sup>2+</sup> -Induced Tropomyosin Movement in Scallop Striated Muscle Thin Filaments. <i>Journal of Molecular Biology</i> , 2008, 383, 512-519.	4.2	12
54	Understanding the Organisation and Role of Myosin Binding Protein C in Normal Striated Muscle by Comparison with MyBP-C Knockout Cardiac Muscle. <i>Journal of Molecular Biology</i> , 2008, 384, 60-72.	4.2	117

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55	Three-Dimensional Reconstruction of Tarantula Myosin Filaments Suggests How Phosphorylation May Regulate Myosin Activity. <i>Journal of Molecular Biology</i> , 2008, 384, 780-797.	4.2	132
56	The globular tail domain puts on the brake to stop the ATPase cycle of myosin Va. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 1140-1145.	7.1	65
57	Three-dimensional structure of vertebrate cardiac muscle myosin filaments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 2386-2390.	7.1	232
58	Head-Head and Head-Tail Interaction: A General Mechanism for Switching Off Myosin II Activity in Cells. <i>Molecular Biology of the Cell</i> , 2008, 19, 3234-3242.	2.1	168
59	Fast skeletal muscle regulatory light chain is required for fast and slow skeletal muscle development. <i>FASEB Journal</i> , 2007, 21, 2205-2214.	0.5	38
60	An Atomic Model of the Thin Filament in the Relaxed and Ca <sup>2+</sup> -Activated States. <i>Journal of Molecular Biology</i> , 2006, 357, 707-717.	4.2	130
61	Structure and function of myosin filaments. <i>Current Opinion in Structural Biology</i> , 2006, 16, 204-212.	5.7	188
62	The Globular Tail Domain of Myosin Va Functions as an Inhibitor of the Myosin Va Motor. <i>Journal of Biological Chemistry</i> , 2006, 281, 21789-21798.	3.4	78
63	Atomic model of a myosin filament in the relaxed state. <i>Nature</i> , 2005, 436, 1195-1199.	27.8	303
64	Mini-thin filaments regulated by troponin-tropomyosin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 656-661.	7.1	29
65	Single Particle Analysis of Relaxed and Activated Muscle Thin Filaments. <i>Journal of Molecular Biology</i> , 2005, 346, 761-772.	4.2	111
66	E93K Charge Reversal on Actin Perturbs Steric Regulation of Thin Filaments. <i>Journal of Molecular Biology</i> , 2005, 347, 889-894.	4.2	8
67	Modes of Caldesmon Binding to Actin. <i>Journal of Biological Chemistry</i> , 2004, 279, 53387-53394.	3.4	45
68	An open or closed case for the conformation of calponin homology domains on F-actin?. <i>Journal of Muscle Research and Cell Motility</i> , 2004, 25, 351-358.	2.0	19
69	The structure of the vertebrate striated muscle thin filament: a tribute to the contributions of Jean Hanson. <i>Journal of Muscle Research and Cell Motility</i> , 2004, 25, 455-466.	2.0	7
70	Drosophila Muscle Regulation Characterized by Electron Microscopy and Three-Dimensional Reconstruction of Thin Filament Mutants. <i>Biophysical Journal</i> , 2004, 86, 1618-1624.	0.5	40
71	Ca <sup>2+</sup> Causes Release of Myosin Heads from the Thick Filament Surface on the Milliseconds Time Scale. <i>Journal of Molecular Biology</i> , 2003, 327, 145-158.	4.2	27
72	An Atomic Model for Actin Binding by the CH Domains and Spectrin-repeat Modules of Utrophin and Dystrophin. <i>Journal of Molecular Biology</i> , 2003, 329, 15-33.	4.2	69

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73	Heterogeneity of Z-band Structure Within a Single Muscle Sarcomere: Implications for Sarcomere Assembly. <i>Journal of Molecular Biology</i> , 2003, 332, 161-169.	4.2	35
74	The Troponin Tail Domain Promotes a Conformational State of the Thin Filament That Suppresses Myosin Activity. <i>Journal of Biological Chemistry</i> , 2002, 277, 27636-27642.	3.4	88
75	Mass Determination of Native Smooth Muscle Myosin Filaments by Scanning Transmission Electron Microscopy. <i>Journal of Molecular Biology</i> , 2002, 318, 999-1007.	4.2	26
76	Capturing Transient Molecular Structures on the Millisecond Time Scale for EM Imaging. <i>Microscopy and Microanalysis</i> , 2002, 8, 828-829.	0.4	2
77	The Ultrastructural Basis of Actin Filament Regulation. <i>Results and Problems in Cell Differentiation</i> , 2002, 36, 149-169.	0.7	8
78	Troponin organization on relaxed and activated thin filaments revealed by electron microscopy and three-dimensional reconstruction <sup>1</sup> Edited by W. Baumeister. <i>Journal of Molecular Biology</i> , 2001, 307, 739-744.	4.2	90
79	Crossbridge and tropomyosin positions observed in native, interacting thick and thin filaments <sup>1</sup> Edited by W. Baumeister. <i>Journal of Molecular Biology</i> , 2001, 311, 1027-1036.	4.2	126
80	Purification of Native Myosin Filaments from Muscle. <i>Biophysical Journal</i> , 2001, 81, 2817-2826.	0.5	27
81	Mechanism of phosphorylation of the regulatory light chain of myosin from tarantula striated muscle. <i>Journal of Muscle Research and Cell Motility</i> , 2001, 22, 51-59.	2.0	22
82	Effects of a Cardiomyopathy-causing Troponin T Mutation on Thin Filament Function and Structure. <i>Journal of Biological Chemistry</i> , 2001, 276, 20788-20794.	3.4	23
83	The Tip of the Coiled-coil Rod Determines the Filament Formation of Smooth Muscle and Nonmuscle Myosin. <i>Journal of Biological Chemistry</i> , 2001, 276, 30293-30300.	3.4	53
84	Myosin light chain kinase binding to a unique site on F-actin revealed by three-dimensional image reconstruction. <i>Journal of Cell Biology</i> , 2001, 154, 611-618.	5.2	40
85	An Actin Subdomain 2 Mutation That Impairs Thin Filament Regulation by Troponin and Tropomyosin. <i>Journal of Biological Chemistry</i> , 2000, 275, 22470-22478.	3.4	20
86	Tropomyosin and actin isoforms modulate the localization of tropomyosin strands on actin filaments. <i>Journal of Molecular Biology</i> , 2000, 302, 593-606.	4.2	235
87	An atomic model of fimbrin binding to F-actin and its implications for filament crosslinking and regulation. <i>Nature Structural Biology</i> , 1998, 5, 787-792.	9.7	124
88	Towards an atomic model of the thick filaments of muscle <sup>1</sup> Edited by W. Baumeister. <i>Journal of Molecular Biology</i> , 1998, 275, 35-41.	4.2	23
89	Functional Analysis of Tpr: Identification of Nuclear Pore Complex Association and Nuclear Localization Domains and a Role in mRNA Export. <i>Journal of Cell Biology</i> , 1998, 143, 1801-1812.	5.2	97
90	Steric-model for activation of muscle thin filaments <sup>1</sup> Edited by P.E. Wright. <i>Journal of Molecular Biology</i> , 1997, 266, 8-14.	4.2	437

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91	Visualization of caldesmon on smooth muscle thin filaments. Journal of Molecular Biology, 1997, 274, 310-317.	4.2	45
92	Polymerization of myosin on activation of rat anococcygeus smooth muscle. Journal of Muscle Research and Cell Motility, 1997, 18, 381-393.	2.0	45
93	Steric-blocking by Tropomyosin Visualized in Relaxed Vertebrate Muscle Thin Filaments. Journal of Molecular Biology, 1995, 251, 191-196.	4.2	169
94	Ca <sup>2+</sup> -induced tropomyosin movement in Limulus thin filaments revealed by three-dimensional reconstruction. Nature, 1994, 368, 65-67.	27.8	324
95	Electron microscopy of the actin-myosin head complex in the presence of ATP. Journal of Molecular Biology, 1992, 223, 391-397.	4.2	51
96	Structure of the myosin filaments of relaxed and rigor vertebrate striated muscle studied by rapid freezing electron microscopy. Journal of Molecular Biology, 1992, 228, 474-487.	4.2	48
97	Structural changes induced in scallop heavy meromyosin molecules by Ca <sup>2+</sup> and ATP. Journal of Muscle Research and Cell Motility, 1992, 13, 436-446.	2.0	16
98	Direct determination of myosin filament symmetry in scallop striated adductor muscle by rapid freezing and freeze substitution. Journal of Molecular Biology, 1991, 220, 125-132.	4.2	19
99	Caldesmon and the structure of smooth muscle thin filaments: electron microscopy of isolated thin filaments. Journal of Muscle Research and Cell Motility, 1990, 11, 176-185.	2.0	72
100	Caldesmon and the Structure of Vertebrate Smooth Muscle Thin Filaments.. Annals of the New York Academy of Sciences, 1990, 599, 75-84.	3.8	10
101	Myosin filaments isolated from skinned amphibian smooth muscle cells are side-polar. Journal of Muscle Research and Cell Motility, 1989, 10, 206-220.	2.0	56
102	Caldesmon and the structure of smooth muscle thin filaments: Immunolocalization of caldesmon on thin filaments. Journal of Muscle Research and Cell Motility, 1989, 10, 101-112.	2.0	55
103	A method for quick-freezing live muscles at known instants during contraction with simultaneous recording of mechanical tension. Journal of Microscopy, 1988, 151, 81-102.	1.8	39
104	Polymerization of vertebrate non-muscle and smooth muscle myosins. Journal of Molecular Biology, 1987, 198, 241-252.	4.2	89
105	Discrepancies in length of myosin head. Nature, 1986, 320, 688-688.	27.8	11
106	The ultrastructural location of C-protein, X-protein and H-protein in rabbit muscle. Journal of Muscle Research and Cell Motility, 1986, 7, 550-567.	2.0	179
107	Muscle structure: First sight of crossbridge crystals. Nature, 1985, 316, 16-17.	27.8	12
108	Arrangement of the heads of myosin in relaxed thick filaments from tarantula muscle. Journal of Molecular Biology, 1985, 184, 429-439.	4.2	99

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109	Arthrin: A new actin-like protein in insect flight muscle. Journal of Molecular Biology, 1985, 182, 443-454.	4.2	55
110	Light-chain phosphorylation controls the conformation of vertebrate non-muscle and smooth muscle myosin molecules. Nature, 1983, 302, 436-439.	27.8	401
111	Cell biology: Muscle au naturel. Nature, 1983, 306, 112-113.	27.8	5
112	Electron microscopy and image analysis of myosin filaments from scallop striated muscle. Journal of Molecular Biology, 1983, 165, 303-320.	4.2	86
113	Three-dimensional reconstruction of thin filaments decorated with a Ca <sup>2+</sup> -regulated myosin. Journal of Molecular Biology, 1982, 157, 299-319.	4.2	133
114	Electron microscopy of thin filaments decorated with a Ca <sup>2+</sup> -regulated myosin. Journal of Molecular Biology, 1980, 140, 35-55.	4.2	169
115	Changes in crossbridge attachment in a myosin-regulated muscle. Nature, 1978, 273, 64-66.	27.8	15
116	Structure of A-segments from frog and rabbit skeletal muscle. Journal of Molecular Biology, 1977, 109, 69-81.	4.2	111
117	Actin cables. Nature, 1977, 269, 106-108.	27.8	0
118	Axial arrangement of crossbridges in thick filaments of vertebrate skeletal muscle. Journal of Molecular Biology, 1976, 102, 325-332.	4.2	83