William Lehman

List of Publications by Citations

122 papers	5,771 citations	42 h-index	73 g-index
129 ext. papers	6,193 ext. citations	6.5 avg, IF	5.61 L-index

#	Paper	IF	Citations
122	Steric-model for activation of muscle thin filaments. *Journal of Molecular Biology*, **1997**, 266, 8-14	6.5	401
121	Regulation in molluscan muscles. *Journal of Molecular Biology*, **1970**, 54, 313-26	6.5	340
120	Ca(2+)-induced tropomyosin movement in Limulus thin filaments revealed by three-dimensional reconstruction. *Nature*, **1994**, 368, 65-7	50.4	289
119	Structure of the F-actin-tropomyosin complex. *Nature*, **2015**, 519, 114-7	50.4	256
118	Tropomyosin and actin isoforms modulate the localization of tropomyosin strands on actin filaments. *Journal of Molecular Biology*, **2000**, 302, 593-606	6.5	225
117	Steric-blocking by tropomyosin visualized in relaxed vertebrate muscle thin filaments. *Journal of Molecular Biology*, **1995**, 251, 191-6	6.5	160
116	Tropomyosin positions in regulated thin filaments revealed by cryoelectron microscopy. *Biophysical Journal*, **1999**, 77, 985-92	2.9	156
115	A comparison of muscle thin filament models obtained from electron microscopy reconstructions and low-angle X-ray fibre diagrams from non-overlap muscle. *Journal of Structural Biology*, **2006**, 155, 273-84	3.4	141
114	Tropomyosin position on F-actin revealed by EM reconstruction and computational chemistry. *Biophysical Journal*, **2011**, 100, 1005-13	2.9	135
113	An atomic model of the thin filament in the relaxed and Ca2+-activated states. *Journal of Molecular Biology*, **2006**, 357, 707-17	6.5	123
112	Structural basis for the regulation of muscle contraction by troponin and tropomyosin. *Journal of Molecular Biology*, **2008**, 379, 929-35	6.5	122
111	Gestalt-binding of tropomyosin to actin filaments. *Journal of Muscle Research and Cell Motility*, **2008**, 29, 213-9	3.5	117
110	Crossbridge and tropomyosin positions observed in native, interacting thick and thin filaments. *Journal of Molecular Biology*, **2001**, 311, 1027-36	6.5	117
109	An atomic model of fimbrin binding to F-actin and its implications for filament crosslinking and regulation. *Nature Structural Biology*, **1998**, 5, 787-92		110
108	Single particle analysis of relaxed and activated muscle thin filaments. *Journal of Molecular Biology*, **2005**, 346, 761-72	6.5	100
107	The shape and flexibility of tropomyosin coiled coils: implications for actin filament assembly and regulation. *Journal of Molecular Biology*, **2010**, 395, 327-39	6.5	97
106	Troponin organization on relaxed and activated thin filaments revealed by electron microscopy and three-dimensional reconstruction. *Journal of Molecular Biology*, **2001**, 307, 739-44	6.5	84

105	The troponin tail domain promotes a conformational state of the thin filament that suppresses myosin activity. *Journal of Biological Chemistry*, **2002**, 277, 27636-42	5.4	83
104	Tropomyosin and the steric mechanism of muscle regulation. *Advances in Experimental Medicine and Biology*, **2008**, 644, 95-109	3.6	75
103	The recruitment of acetylated and unacetylated tropomyosin to distinct actin polymers permits the discrete regulation of specific myosins in fission yeast. *Journal of Cell Science*, **2010**, 123, 3235-43	5.3	72
102	Structural basis for the activation of muscle contraction by troponin and tropomyosin. *Journal of Molecular Biology*, **2009**, 388, 673-81	6.5	69
101	The relationship between curvature, flexibility and persistence length in the tropomyosin coiled-coil. *Journal of Structural Biology*, **2010**, 170, 313-8	3.4	68
100	Acetylation regulates tropomyosin function in the fission yeast Schizosaccharomyces pombe. *Journal of Cell Science*, **2007**, 120, 1635-45	5.3	68
99	Three-dimensional reconstruction of caldesmon-containing smooth muscle thin filaments. *Journal of Cell Biology*, **1993**, 123, 313-21	7.3	67
98	An atomic model for actin binding by the CH domains and spectrin-repeat modules of utrophin and dystrophin. *Journal of Molecular Biology*, **2003**, 329, 15-33	6.5	66
97	Caldesmon and the structure of smooth muscle thin filaments: electron microscopy of isolated thin filaments. *Journal of Muscle Research and Cell Motility*, **1990**, 11, 176-85	3.5	65
96	Thick-filament-linked calcium regulation in vertebrate striated muscle. *Nature*, **1978**, 274, 80-1	50.4	65
95	Mutations in repeating structural motifs of tropomyosin cause gain of function in skeletal muscle myopathy patients. *Human Molecular Genetics*, **2013**, 22, 4978-87	5.6	62
94	3-D image reconstruction of reconstituted smooth muscle thin filaments containing calponin: visualization of interactions between F-actin and calponin. *Journal of Molecular Biology*, **1997**, 273, 150-9	6.5	62
93	Electron microscopy and 3D reconstruction of F-actin decorated with cardiac myosin-binding protein C (cMyBP-C). *Journal of Molecular Biology*, **2011**, 410, 214-25	6.5	58
92	Three-dimensional image reconstruction of reconstituted smooth muscle thin filaments: effects of caldesmon. *Biophysical Journal*, **1997**, 72, 2398-404	2.9	56
91	Activation of the adenosine triphosphatase of Limulus polyphemus actomyosin by tropomyosin. *Journal of General Physiology*, **1972**, 59, 375-87	3.4	52
90	Gestalt-binding of tropomyosin on actin during thin filament activation. *Journal of Muscle Research and Cell Motility*, **2013**, 34, 155-63	3.5	49
89	The C terminus of cardiac troponin I stabilizes the Ca2+-activated state of tropomyosin on actin filaments. *Circulation Research*, **2010**, 106, 705-11	15.7	49
88	Caldesmon and the structure of smooth muscle thin filaments: immunolocalization of caldesmon on thin filaments. *Journal of Muscle Research and Cell Motility*, **1989**, 10, 101-12	3.5	47

87	FlnA binding to PACSIN2 F-BAR domain regulates membrane tubulation in megakaryocytes and platelets. *Blood*, **2015**, 126, 80-8	2.2	44
86	An atomic model of the tropomyosin cable on F-actin. *Biophysical Journal*, **2014**, 107, 694-699	2.9	43
85	Calcium-dependent myosin from insect flight muscles. *Journal of General Physiology*, **1974**, 63, 553-63	3.4	43
84	Electron microscopy and persistence length analysis of semi-rigid smooth muscle tropomyosin strands. *Biophysical Journal*, **2010**, 99, 862-8	2.9	42
83	Visualization of caldesmon on smooth muscle thin filaments. *Journal of Molecular Biology*, **1997**, 274, 310-7	6.5	42
82	Three-dimensional reconstruction of thin filaments containing mutant tropomyosin. *Biophysical Journal*, **2000**, 78, 908-17	2.9	42
81	Thin Filament Structure and the Steric Blocking Model. *Comprehensive Physiology*, **2016**, 6, 1043-69	7.7	42
80	Modes of caldesmon binding to actin: sites of caldesmon contact and modulation of interactions by phosphorylation. *Journal of Biological Chemistry*, **2004**, 279, 53387-94	5.4	41
79	The flexibility of two tropomyosin mutants, D175N and E180G, that cause hypertrophic cardiomyopathy. *Biochemical and Biophysical Research Communications*, **2012**, 424, 493-6	3.4	40
78	Hybrid troponin reconstituted from vertebrate and arthropod subunits. *Nature*, **1975**, 255, 424-6	50.4	40
77	Three-dimensional organization of troponin on cardiac muscle thin filaments in the relaxed state. *Biophysical Journal*, **2014**, 106, 855-64	2.9	39
76	The stoichiometry of the components of arthropod thin filaments. *Biochimica Et Biophysica Acta (BBA) - Protein Structure*, **1976**, 434, 215-22		39
75	Energy landscapes reveal the myopathic effects of tropomyosin mutations. *Archives of Biochemistry and Biophysics*, **2014**, 564, 89-99	4.1	38
74	Troponin C in brain. *Nature*, **1975**, 258, 260-7	50.4	38
73	Drosophila muscle regulation characterized by electron microscopy and three-dimensional reconstruction of thin filament mutants. *Biophysical Journal*, **2004**, 86, 1618-24	2.9	37
72	Myosin light chain kinase binding to a unique site on F-actin revealed by three-dimensional image reconstruction. *Journal of Cell Biology*, **2001**, 154, 611-7	7.3	36
71	Structure and flexibility of the tropomyosin overlap junction. *Biochemical and Biophysical Research Communications*, **2014**, 446, 304-8	3.4	33
70	Tropomyosin variants describe distinct functional subcellular domains in differentiated vascular smooth muscle cells. *American Journal of Physiology - Cell Physiology*, **2011**, 300, C1356-65	5.4	32

69	Structural determinants of muscle thin filament cooperativity. *Archives of Biochemistry and Biophysics*, **2016**, 594, 8-17	4.1	31
68	Diversity in smooth muscle thin filament composition. *BBA - Proteins and Proteomics*, **1987**, 914, 35-9		31
67	Direct observation of tropomyosin binding to actin filaments. *Cytoskeleton*, **2015**, 72, 292-303	2.4	30
66	A Drosophila melanogaster model of diastolic dysfunction and cardiomyopathy based on impaired troponin-T function. *Circulation Research*, **2014**, 114, e6-17	15.7	30
65	Tropomyosin movement on F-actin during muscle activation explained by energy landscapes. *Archives of Biochemistry and Biophysics*, **2014**, 545, 63-8	4.1	28
64	Mini-thin filaments regulated by troponin-tropomyosin. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 656-61	11.5	28
63	Thin-filament-linked regulation in molluscan muscles. *Biochimica Et Biophysica Acta (BBA) - Protein Structure*, **1981**, 668, 349-56		28
62	Structural analysis of smooth muscle tropomyosin α and β isoforms. *Journal of Biological Chemistry*, **2012**, 287, 3165-74	5.4	25
61	Curvature variation along the tropomyosin molecule. *Journal of Structural Biology*, **2010**, 170, 307-12	3.4	25
60	Structure and dynamics of the actin-based smooth muscle contractile and cytoskeletal apparatus. *Journal of Muscle Research and Cell Motility*, **2012**, 33, 461-9	3.5	24
59	Phosphorylation of Ser283 enhances the stiffness of the tropomyosin head-to-tail overlap domain. *Archives of Biochemistry and Biophysics*, **2015**, 571, 10-5	4.1	23
58	Switching Muscles On and Off in Steps: The McKillop-Geeves Three-State Model of Muscle Regulation. *Biophysical Journal*, **2017**, 112, 2459-2466	2.9	22
57	Polymorphism in tropomyosin structure and function. *Journal of Muscle Research and Cell Motility*, **2013**, 34, 177-87	3.5	22
56	Cortactin binding to F-actin revealed by electron microscopy and 3D reconstruction. *Journal of Molecular Biology*, **2006**, 359, 840-7	6.5	22
55	Distortion of the Actin A-Triad Results in Contractile Disinhibition and Cardiomyopathy. *Cell Reports* , **2017**, 20, 2612-2625	10.6	21
54	Electrostatic interaction map reveals a new binding position for tropomyosin on F-actin. *Journal of Muscle Research and Cell Motility*, **2015**, 36, 525-33	3.5	19
53	Tarantula myosin free head regulatory light chain phosphorylation stiffens N-terminal extension, releasing it and blocking its docking back. *Molecular BioSystems*, **2015**, 11, 2180-9		19
52	The structural dynamics of α-tropomyosin on F-actin shape the overlap complex between adjacent tropomyosin molecules. *Archives of Biochemistry and Biophysics*, **2014**, 552-553, 68-73	4.1	19

51	Effects of a cardiomyopathy-causing troponin t mutation on thin filament function and structure. *Journal of Biological Chemistry*, **2001**, 276, 20788-94	5.4	19
50	An actin subdomain 2 mutation that impairs thin filament regulation by troponin and tropomyosin. *Journal of Biological Chemistry*, **2000**, 275, 22470-8	5.4	19
49	An open or closed case for the conformation of calponin homology domains on F-actin?. *Journal of Muscle Research and Cell Motility*, **2004**, 25, 351-8	3.5	18
48	Caldesmon association with smooth muscle thin filaments isolated in the presence and absence of calcium. *Biochimica Et Biophysica Acta - Molecular Cell Research*, **1986**, 885, 88-90	4.9	18
47	Phylogenetic diversity of the proteins regulating muscular contraction. *International Review of Cytology*, **1976**, 44, 55-92		17
46	Structural implications of conserved aspartate residues located in tropomyosin□s coiled-coil core. *Bioarchitecture*, **2011**, 1, 250-255		16
45	The caldesmon content of vertebrate smooth muscle. *BBA - Proteins and Proteomics*, **1993**, 1203, 53-9		16
44	Predicting Effects of Tropomyosin Mutations on Cardiac Muscle Contraction through Myofilament Modeling. *Frontiers in Physiology*, **2016**, 7, 473	4.6	16
43	The distribution of troponin-like proteins on thin filaments of the bay scallop, aequipecten irradians. *Journal of Muscle Research and Cell Motility*, **1983**, 4, 379-89	3.5	14
42	Tropomyosin Must Interact Weakly with Actin to Effectively Regulate Thin Filament Function. *Biophysical Journal*, **2017**, 113, 2444-2451	2.9	13
41	ADP binding to relaxed scallop myofibrils. *Nature*, **1974**, 252, 38-9	50.4	13
40	Cryo-EM and Molecular Docking Shows Myosin Loop 4 Contacts Actin and Tropomyosin on Thin Filaments. *Biophysical Journal*, **2020**, 119, 821-830	2.9	13
39	Tropomyosin diffusion over actin subunits facilitates thin filament assembly. *Structural Dynamics*, **2016**, 3, 012002	3.2	12
38	Ultra short yeast tropomyosins show novel myosin regulation. *Journal of Biological Chemistry*, **2008**, 283, 1902-10	5.4	12
37	Docking Troponin T onto the Tropomyosin Overlapping Domain of Thin Filaments. *Biophysical Journal*, **2020**, 118, 325-336	2.9	12
36	HCM and DCM cardiomyopathy-linked □ropomyosin mutations influence off-state stability and crossbridge interaction on thin filaments. *Archives of Biochemistry and Biophysics*, **2018**, 647, 84-92	4.1	11
35	The ionic requirements for regulation by molluscan thin filaments. *BBA - Proteins and Proteomics*, **1983**, 745, 1-5		11
34	A new twist on tropomyosin binding to actin filaments: perspectives on thin filament function, assembly and biomechanics. *Journal of Muscle Research and Cell Motility*, **2020**, 41, 23-38	3.5	11

33	Spontaneous transitions of actin-bound tropomyosin toward blocked and closed states. *Journal of General Physiology*, **2019**, 151, 4-8	3.4	10
32	Precise Binding of Tropomyosin on Actin Involves Sequence-Dependent Variance in Coiled-Coil Twisting. *Biophysical Journal*, **2018**, 115, 1082-1092	2.9	10
31	Electron microscopy and 3D reconstruction reveals filamin Ig domain binding to F-actin. *Journal of Molecular Biology*, **2012**, 424, 248-56	6.5	9
30	Altering the stability of the Cdc8 overlap region modulates the ability of this tropomyosin to bind co-operatively to actin and regulate myosin. *Biochemical Journal*, **2011**, 438, 265-73	3.8	9
29	Caldesmon and the structure of vertebrate smooth muscle thin filaments. A minireview. *Annals of the New York Academy of Sciences*, **1990**, 599, 75-84	6.5	9
28	Phylogenetic diversity of troponin subunit-C amino acid composition. *FEBS Letters*, **1980**, 121, 273-4	3.8	9
27	Protein-Protein Docking Reveals Dynamic Interactions of Tropomyosin on Actin Filaments. *Biophysical Journal*, **2020**, 119, 75-86	2.9	9
26	E93K charge reversal on actin perturbs steric regulation of thin filaments. *Journal of Molecular Biology*, **2005**, 347, 889-94	6.5	8
25	The location and periodicity of a troponin-T-like protein in the myofibril of the horseshoe crab Limulus polyphemus. *Journal of Molecular Biology*, **1982**, 154, 385-91	6.5	8
24	The ultrastructural basis of actin filament regulation. *Results and Problems in Cell Differentiation*, **2002**, 36, 149-69	1.4	8
23	A role for actin flexibility in thin filament-mediated contractile regulation and myopathy. *Nature Communications*, **2020**, 11, 2417	17.4	7
22	Effects of basic calponin on the flexural mechanics and stability of F-actin. *Cytoskeleton*, **2012**, 69, 49-58	2.4	7
21	Structural basis for myopathic defects engendered by alterations in the myosin rod. *Journal of Molecular Biology*, **2011**, 414, 477-84	6.5	7
20	The effect of calcium on the aggregation of chicken gizzard thin filaments. *Journal of Muscle Research and Cell Motility*, **1986**, 7, 537-49	3.5	7
19	Structural studies on maturing actin filaments. *Bioarchitecture*, **2011**, 1, 127-133		6
18	The structure of the vertebrate striated muscle thin filament: a tribute to the contributions of Jean Hanson. *Journal of Muscle Research and Cell Motility*, **2004**, 25, 455-66	3.5	6
17	35 kDa proteins are not components of vertebrate smooth muscle thin filaments. *BBA - Proteins and Proteomics*, **1989**, 996, 57-61		6
16	Actin and the Structure of Smooth Muscle Thin Filaments **1996**, 47-60		5

15	Novel immunological technique. *Journal of Muscle Research and Cell Motility*, **1992**, 13, 582-5	3.5	5
14	The propensity for tropomyosin twisting in the presence and absence of F-actin. *Archives of Biochemistry and Biophysics*, **2016**, 609, 51-58	4.1	5
13	The mechanism of thin filament regulation: Models in conflict?. *Journal of General Physiology*, **2019**, 151, 1265-1271	3.4	5
12	The characterization of invertebrate troponin C. *Comparative Biochemistry and Physiology Part B: Comparative Biochemistry*, **1984**, 79, 525-9		4
11	Reference Free Single Particle Analysis Of Reconstituted Thin Filaments. *Biophysical Journal*, **2009**, 96, 376a	2.9	3
10	The isolation and characterization of a troponin-C-like protein from the mantle muscle of the squid Loligo pealei. *Comparative Biochemistry and Physiology Part B: Comparative Biochemistry*, **1982**, 71, 507-509		3
9	C-terminal troponin-I residues trap tropomyosin in the muscle thin filament blocked-state. *Biochemical and Biophysical Research Communications*, **2021**, 551, 27-32	3.4	3
8	Electron microscopy and three-dimensional reconstruction of native thin filaments reveal species-specific differences in regulatory strand densities. *Biochemical and Biophysical Research Communications*, **2010**, 391, 193-7	3.4	2
7	Tropomyosin Flexibility Evaluated by Electron Microscopy Image Analysis. *Biophysical Journal*, **2009**, 96, 231a	2.9	2
6	Cardiomyopathy Mutation Alters End-to-End Junction of Tropomyosin and Reduces Calcium Sensitivity. *Biophysical Journal*, **2020**, 118, 303-312	2.9	2
5	Modulation of cardiac thin filament structure by phosphorylated troponin-I analyzed by protein-protein docking and molecular dynamics simulation.. *Archives of Biochemistry and Biophysics* , **2022**, 109282	4.1	2
4	The Effect of Tropomyosin Mutations on Actin-Tropomyosin Binding: In Search of Lost Time. *Biophysical Journal*, **2019**, 116, 2275-2284	2.9	1
3	M8R tropomyosin mutation disrupts actin binding and filament regulation: The beginning affects the middle and end. *Journal of Biological Chemistry*, **2020**, 295, 17128-17137	5.4	1
2	Our muscle at near-atomic resolution - Cryo-EM structure of the F-actin-tropomyosin complex **2016** , 7-8		
1	Functional Remodeling of the Contractile Smooth Muscle Cell Cortex, a Provocative Concept, Supported by Direct Visualization of Cortical Remodeling. *Biology*, **2022**, 11, 662	4.9	