William Lehman

List of Publications by Year
in descending order

127 papers	6,597 citations	71004 43 h-index	78623 77 g-index
129 all docs	129 docs citations	129 times ranked	3126 citing authors

#	Article	IF	Citations
1	Functional Remodeling of the Contractile Smooth Muscle Cell Cortex, a Provocative Concept, Supported by Direct Visualization of Cortical Remodeling. Biology, 2022, 11, 662.	1.3	2
2	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, 725, 109282.	1.4	11
3	C-terminal troponin-I residues trap tropomyosin in the muscle thin filament blocked-state. Biochemical and Biophysical Research Communications, 2021, 551, 27-32.	1.0	17
4	Loss of crossbridge inhibition drives pathological cardiac hypertrophy in patients harboring the TPM1 E192K mutation. Journal of General Physiology, 2021, 153, .	0.9	15
5	The Central Role of the F-Actin Surface in Myosin Force Generation. Biology, 2021, 10, 1221.	1.3	9
6	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.	0.9	21
7	Introducing a special issue of the Journal of Muscle Research and Cell Motility on actin and actin-binding proteins. Journal of Muscle Research and Cell Motility, 2020, 41, 1-2.	0.9	3
8	Docking Troponin T onto the Tropomyosin Overlapping Domain of Thin Filaments. Biophysical Journal, 2020, 118, 325-336.	0.2	22
9	Cardiomyopathy Mutation Alters End-to-End Junction of Tropomyosin and Reduces Calcium Sensitivity. Biophysical Journal, 2020, 118, 303-312.	0.2	10
10	Cryo-EM and Molecular Docking Shows Myosin Loop 4 Contacts Actin and Tropomyosin on Thin Filaments. Biophysical Journal, 2020, 119, 821-830.	0.2	41
11	A role for actin flexibility in thin filament-mediated contractile regulation and myopathy. Nature Communications, 2020, 11, 2417.	5.8	16
12	Protein-Protein Docking Reveals Dynamic Interactions of Tropomyosin on Actin Filaments. Biophysical Journal, 2020, 119, 75-86.	0.2	24
13	M8R tropomyosin mutation disrupts actin binding and filament regulation: The beginning affects the middle and end. Journal of Biological Chemistry, 2020, 295, 17128-17137.	1.6	7
14	The Effect of Tropomyosin Mutations on Actin-Tropomyosin Binding: In Search of Lost Time. Biophysical Journal, 2019, 116, 2275-2284.	0.2	6
15	The mechanism of thin filament regulation: Models in conflict?. Journal of General Physiology, 2019, 151, 1265-1271.	0.9	9
16	Spontaneous transitions of actin-bound tropomyosin toward blocked and closed states. Journal of General Physiology, 2019, 151, 4-8.	0.9	13
17	HCM and DCM cardiomyopathy-linked Î±-tropomyosin mutations influence off-state stability and crossbridge interaction on thin filaments. Archives of Biochemistry and Biophysics, 2018, 647, 84-92.	1.4	19
18	Precise Binding of Tropomyosin on Actin Involves Sequence-Dependent Variance in Coiled-Coil Twisting. Biophysical Journal, 2018, 115, 1082-1092.	0.2	19

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19	Switching Muscles On and Off in Steps: TheÂMcKillop-Geeves Three-State Model of Muscle Regulation. Biophysical Journal, 2017, 112, 2459-2466.	0.2	26
20	Distortion of the Actin A-Triad Results in Contractile Disinhibition and Cardiomyopathy. Cell Reports, 2017, 20, 2612-2625.	2.9	26
21	Tropomyosin Must Interact Weakly with Actin to Effectively Regulate Thin Filament Function. Biophysical Journal, 2017, 113, 2444-2451.	0.2	18
22	Predicting Effects of Tropomyosin Mutations on Cardiac Muscle Contraction through Myofilament Modeling. Frontiers in Physiology, 2016, 7, 473.	1.3	26
23	Thin Filament Structure and the Steric Blocking Model. , 2016, 6, 1043-1069.		52
24	The propensity for tropomyosin twisting in the presence and absence of F-actin. Archives of Biochemistry and Biophysics, 2016, 609, 51-58.	1.4	5
25	Tropomyosin diffusion over actin subunits facilitates thin filament assembly. Structural Dynamics, 2016, 3, 012002.	0.9	13
26	Structural determinants of muscle thin filament cooperativity. Archives of Biochemistry and Biophysics, 2016, 594, 8-17.	1.4	34
27	FlnA binding to PACSIN2 F-BAR domain regulates membrane tubulation in megakaryocytes and platelets. Blood, 2015, 126, 80-88.	0.6	52
28	Direct observation of tropomyosin binding to actin filaments. Cytoskeleton, 2015, 72, 292-303.	1.0	39
29	Tarantula myosin free head regulatory light chain phosphorylation stiffens N-terminal extension, releasing it and blocking its docking back. Molecular BioSystems, 2015, 11, 2180-2189.	2.9	19
30	Phosphorylation of Ser283 enhances the stiffness of the tropomyosin head-to-tail overlap domain. Archives of Biochemistry and Biophysics, 2015, 571, 10-15.	1.4	27
31	Electrostatic interaction map reveals a new binding position for tropomyosin on F-actin. Journal of Muscle Research and Cell Motility, 2015, 36, 525-533.	0.9	25
32	Structure of the F-actinâ€"tropomyosin complex. Nature, 2015, 519, 114-117.	13.7	321
33	A <i>Drosophila melanogaster</i> Model of Diastolic Dysfunction and Cardiomyopathy Based on Impaired Troponin-T Function. Circulation Research, 2014, 114, e6-17.	2.0	40
34	The structural dynamics of Î±-tropomyosin on F-actin shape the overlap complex between adjacent tropomyosin molecules. Archives of Biochemistry and Biophysics, 2014, 552-553, 68-73.	1.4	22
35	Structure and flexibility of the tropomyosin overlap junction. Biochemical and Biophysical Research Communications, 2014, 446, 304-308.	1.0	37
36	Three-Dimensional Organization of Troponin on Cardiac Muscle Thin Filaments in the Relaxed State. Biophysical Journal, 2014, 106, 855-864.	0.2	46

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37	Tropomyosin movement on F-actin during muscle activation explained by energy landscapes. Archives of Biochemistry and Biophysics, 2014, 545, 63-68.	1.4	29
38	Energy landscapes reveal the myopathic effects of tropomyosin mutations. Archives of Biochemistry and Biophysics, 2014, 564, 89-99.	1.4	48
39	An Atomic Model of the Tropomyosin Cable on F-actin. Biophysical Journal, 2014, 107, 694-699.	0.2	49
40	Polymorphism in tropomyosin structure and function. Journal of Muscle Research and Cell Motility, 2013, 34, 177-187.	0.9	30
41	Gestalt-Binding of tropomyosin on actin during thin filament activation. Journal of Muscle Research and Cell Motility, 2013, 34, 155-163.	0.9	53
42	Mutations in repeating structural motifs of tropomyosin cause gain of function in skeletal muscle myopathy patients. Human Molecular Genetics, 2013, 22, 4978-4987.	1.4	75
43	Electron Microscopy and 3D Reconstruction Reveals Filamin Ig Domain Binding to F-Actin. Journal of Molecular Biology, 2012, 424, 248-256.	2.0	12
44	Structure and dynamics of the actin-based smooth muscle contractile and cytoskeletal apparatus. Journal of Muscle Research and Cell Motility, 2012, 33, 461-469.	0.9	31
45	Structural Analysis of Smooth Muscle Tropomyosin Î± and Î² Isoforms. Journal of Biological Chemistry, 2012, 287, 3165-3174.	1.6	30
46	The flexibility of two tropomyosin mutants, D175N and E180G, that cause hypertrophic cardiomyopathy. Biochemical and Biophysical Research Communications, 2012, 424, 493-496.	1.0	43
47	Tropomyosin Movement on F-actin Analyzed by Energy Landscape Determination. Biophysical Journal, 2012, 102, 17a.	0.2	1
48	Effects of basic calponin on the flexural mechanics and stability of Fâ€actin. Cytoskeleton, 2012, 69, 49-58.	1.0	8
49	Tropomyosin Position on F-Actin Revealed by EM Reconstruction and Computational Chemistry. Biophysical Journal, 2011, 100, 1005-1013.	0.2	147
50	Tropomyosin variants describe distinct functional subcellular domains in differentiated vascular smooth muscle cells. American Journal of Physiology - Cell Physiology, 2011, 300, C1356-C1365.	2.1	36
51	Electron Microscopy and 3D Reconstruction of F-Actin Decorated with Cardiac Myosin-Binding Protein C (cMyBP-C). Journal of Molecular Biology, 2011, 410, 214-225.	2.0	67
52	Structural Basis for Myopathic Defects Engendered by Alterations in the Myosin Rod. Journal of Molecular Biology, 2011, 414, 477-484.	2.0	9
53	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, 265-273.	1.7	10
54	Structural studies on maturing actin filaments. Bioarchitecture, 2011, 1, 127-133.	1.5	6

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55	Structural implications of conserved aspartate residues located in tropomyosinâ€™s coiled-coil core. Bioarchitecture, 2011, 1, 250-255.	1.5	17
56	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, 3235-3243.	1.2	87
57	The C Terminus of Cardiac Troponin I Stabilizes the Ca ²⁺ -Activated State of Tropomyosin on Actin Filaments. Circulation Research, 2010, 106, 705-711.	2.0	55
58	Electron Microscopy and Persistence Length Analysis of Semi-Rigid Smooth Muscle Tropomyosin Strands. Biophysical Journal, 2010, 99, 862-868.	0.2	45
59	Curvature variation along the tropomyosin molecule. Journal of Structural Biology, 2010, 170, 307-312.	1.3	25
60	The relationship between curvature, flexibility and persistence length in the tropomyosin coiled-coil. Journal of Structural Biology, 2010, 170, 313-318.	1.3	75
61	The Shape and Flexibility of Tropomyosin Coiled Coils: Implications for Actin Filament Assembly and Regulation. Journal of Molecular Biology, 2010, 395, 327-339.	2.0	108
62	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, 193-197.	1.0	2
63	Structural Basis for the Activation of Muscle Contraction by Troponin and Tropomyosin. Journal of Molecular Biology, 2009, 388, 673-681.	2.0	77
64	Tropomyosin Flexibility Evaluated by Electron Microscopy Image Analysis. Biophysical Journal, 2009, 96, 231a.	0.2	2
65	Reference Free Single Particle Analysis Of Reconstituted Thin Filaments. Biophysical Journal, 2009, 96, 376a.	0.2	3
66	Gestalt-binding of tropomyosin to actin filaments. Journal of Muscle Research and Cell Motility, 2008, 29, 213-219.	0.9	125
67	Structural Basis for the Regulation of Muscle Contraction by Troponin and Tropomyosin. Journal of Molecular Biology, 2008, 379, 929-935.	2.0	152
68	Ultra Short Yeast Tropomyosins Show Novel Myosin Regulation. Journal of Biological Chemistry, 2008, 283, 1902-1910.	1.6	14
69	Tropomyosin and the Steric Mechanism of Muscle Regulation. Advances in Experimental Medicine and Biology, 2008, 644, 95-109.	0.8	83
70	Acetylation regulates tropomyosin function in the fission yeast Schizosaccharomyces pombe. Journal of Cell Science, 2007, 120, 1635-1645.	1.2	77
71	An Atomic Model of the Thin Filament in the Relaxed and Ca2+-Activated States. Journal of Molecular Biology, 2006, 357, 707-717.	2.0	130
72	Cortactin Binding to F-actin Revealed by Electron Microscopy and 3D Reconstruction. Journal of Molecular Biology, 2006, 359, 840-847.	2.0	25

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73	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, 273-284.	1.3	160
74	Mini-thin filaments regulated by troponin-tropomyosin. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 656-661.	3.3	29
75	Single Particle Analysis of Relaxed and Activated Muscle Thin Filaments. Journal of Molecular Biology, 2005, 346, 761-772.	2.0	111
76	E93K Charge Reversal on Actin Perturbs Steric Regulation of Thin Filaments. Journal of Molecular Biology, 2005, 347, 889-894.	2.0	8
77	Modes of Caldesmon Binding to Actin. Journal of Biological Chemistry, 2004, 279, 53387-53394.	1.6	45
78	An open or closed case for the conformation of calponin homology domains on F-actin?. Journal of Muscle Research and Cell Motility, 2004, 25, 351-358.	0.9	19
79	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, 455-466.	0.9	7
80	Drosophila Muscle Regulation Characterized by Electron Microscopy and Three-Dimensional Reconstruction of Thin Filament Mutants. Biophysical Journal, 2004, 86, 1618-1624.	0.2	40
81	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.	2.0	69
82	The Troponin Tail Domain Promotes a Conformational State of the Thin Filament That Suppresses Myosin Activity. Journal of Biological Chemistry, 2002, 277, 27636-27642.	1.6	88
83	The Ultrastructural Basis of Actin Filament Regulation. Results and Problems in Cell Differentiation, 2002, 36, 149-169.	0.2	8
84	Troponin organization on relaxed and activated thin filaments revealed by electron microscopy and three-dimensional reconstruction11Edited by W. Baumeister. Journal of Molecular Biology, 2001, 307, 739-744.	2.0	90
85	Crossbridge and tropomyosin positions observed in native, interacting thick and thin filaments11Edited by W. Baumeister. Journal of Molecular Biology, 2001, 311, 1027-1036.	2.0	126
86	Effects of a Cardiomyopathy-causing Troponin T Mutation on Thin Filament Function and Structure. Journal of Biological Chemistry, 2001, 276, 20788-20794.	1.6	23
87	Myosin light chain kinase binding to a unique site on F-actin revealed by three-dimensional image reconstruction. Journal of Cell Biology, 2001, 154, 611-618.	2.3	40
88	An Actin Subdomain 2 Mutation That Impairs Thin Filament Regulation by Troponin and Tropomyosin. Journal of Biological Chemistry, 2000, 275, 22470-22478.	1.6	20
89	Tropomyosin and actin isoforms modulate the localization of tropomyosin strands on actin filaments. Journal of Molecular Biology, 2000, 302, 593-606.	2.0	235
90	Three-Dimensional Reconstruction of Thin Filaments Containing Mutant Tropomyosin. Biophysical Journal, 2000, 78, 908-917.	0.2	43

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91	Tropomyosin Positions in Regulated Thin Filaments Revealed by Cryoelectron Microscopy. Biophysical Journal, 1999, 77, 985-992.	0.2	165
92	An atomic model of fimbrin binding to F-actin and its implications for filament crosslinking and regulation. Nature Structural Biology, 1998, 5, 787-792.	9.7	124
93	Three-dimensional image reconstruction of reconstituted smooth muscle thin filaments: effects of caldesmon. Biophysical Journal, 1997, 72, 2398-2404.	0.2	58
94	Steric-model for activation of muscle thin filaments 1 1 Edited by P.E. Wright. Journal of Molecular Biology, 1997, 266, 8-14.	2.0	437
95	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, 150-159.	2.0	69
96	Visualization of caldesmon on smooth muscle thin filaments. Journal of Molecular Biology, 1997, 274, 310-317.	2.0	45
97	Actin and the Structure of Smooth Muscle Thin Filaments. , 1996, , 47-60.		7
98	Steric-blocking by Tropomyosin Visualized in Relaxed Vertebrate Muscle Thin Filaments. Journal of Molecular Biology, 1995, 251, 191-196.	2.0	169
99	Ca2+-induced tropomyosin movement in Limulus thin filaments revealed by three-dimensional reconstruction. Nature, 1994, 368, 65-67.	13.7	324
100	The caldesmon content of vertebrate smooth muscle. BBA - Proteins and Proteomics, 1993, 1203, 53-59.	2.1	17
101	Three-dimensional reconstruction of caldesmon-containing smooth muscle thin filaments.. Journal of Cell Biology, 1993, 123, 313-321.	2.3	70
102	Correspondence. Journal of Muscle Research and Cell Motility, 1992, 13, 582-583.	0.9	6
103	Calponin and the composition of smooth muscle thin filaments. Journal of Muscle Research and Cell Motility, 1991, 12, 221-224.	0.9	62
104	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.	0.9	72
105	Caldesmon and the Structure of Vertebrate Smooth Muscle Thin Filaments.. Annals of the New York Academy of Sciences, 1990, 599, 75-84.	1.8	10
106	35 kDa proteins are not components of vertebrate smooth muscle thin filaments. BBA - Proteins and Proteomics, 1989, 996, 57-61.	2.1	8
107	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.	0.9	55
108	Diversity in smooth muscle thin filament composition. BBA - Proteins and Proteomics, 1987, 914, 35-39.	2.1	36

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109	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.	1.9	19
110	The effect of calcium on the aggregation of chicken gizzard thin filaments. Journal of Muscle Research and Cell Motility, 1986, 7, 537-549.	0.9	7
111	The characterization of invertebrate troponin C. Comparative Biochemistry and Physiology Part B: Comparative Biochemistry, 1984, 79, 525-529.	0.2	5
112	The ionic requirements for regulation by molluscan thin filaments. BBA - Proteins and Proteomics, 1983, 745, 1-5.	2.1	11
113	The distribution of troponin-like proteins on thin filaments of the bay scallop,Aequipecten irradians. Journal of Muscle Research and Cell Motility, 1983, 4, 379-389.	0.9	15
114	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.	0.2	3
115	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, 385-391.	2.0	8
116	Thin-filament-linked regulation in molluscan muscles. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1981, 668, 349-356.	1.7	29
117	Phylogenetic diversity of troponin subunit-C amino acid composition. FEBS Letters, 1980, 121, 273-274.	1.3	10
118	Thick-filament-linked calcium regulation in vertebrate striated muscle. Nature, 1978, 274, 80-81.	13.7	70
119	The stoichiometry of the components of arthropod thin filaments. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1976, 434, 215-222.	1.7	41
120	Phylogenetic Diversity of the Proteins Regulating Muscular Contraction. International Review of Cytology, 1976, 44, 55-92.	6.2	18
121	Hybrid troponin reconstituted from vertebrate and arthropod subunits. Nature, 1975, 255, 424-426.	13.7	42
122	Troponin C in brain. Nature, 1975, 258, 260-262.	13.7	42
123	Calcium-Dependent Myosin from Insect Flight Muscles. Journal of General Physiology, 1974, 63, 553-563.	0.9	46
124	ADP binding to relaxed scallop myofibrils. Nature, 1974, 252, 38-39.	13.7	13
125	Activation of the Adenosine Triphosphatase of Limulus polyphemus Actomyosin by Tropomyosin. Journal of General Physiology, 1972, 59, 375-387.	0.9	56
126	Regulation in molluscan muscles. Journal of Molecular Biology, 1970, 54, 313-326.	2.0	377

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127	Modeling Human Cardiac Thin Filament Structures. Frontiers in Physiology, 0, 13, .	1.3	7