Leslie A Leinwand

List of Publications by Citations

143 papers	7,861 citations	50 h-index	85 g-index
157 ext. papers	9,279 ext. citations	9.4 avg, IF	6.1 L-index

#	Paper	IF	Citations
143	Myosin heavy chain isoform expression in the failing and nonfailing human heart. *Circulation Research*, **2000**, 86, 386-90	15.7	405
142	Valvular myofibroblast activation by transforming growth factor-beta: implications for pathological extracellular matrix remodeling in heart valve disease. *Circulation Research*, **2004**, 95, 253-60	15.7	309
141	A small-molecule inhibitor of sarcomere contractility suppresses hypertrophic cardiomyopathy in mice. *Science*, **2016**, 351, 617-21	33.3	282
140	The mammalian myosin heavy chain gene family. *Annual Review of Cell and Developmental Biology*, **1996**, 12, 417-39	12.6	270
139	Cardiac and skeletal muscle adaptations to voluntary wheel running in the mouse. *Journal of Applied Physiology*, **2001**, 90, 1900-8	3.7	269
138	The cell biology of disease: cellular mechanisms of cardiomyopathy. *Journal of Cell Biology*, **2011**, 194, 355-65	7.3	231
137	Genetic variability in forced and voluntary endurance exercise performance in seven inbred mouse strains. *Journal of Applied Physiology*, **2002**, 92, 2245-55	3.7	213
136	Developmental myosins: expression patterns and functional significance. *Skeletal Muscle*, **2015**, 5, 22	5.1	209
135	Comparative sequence analysis of the complete human sarcomeric myosin heavy chain family: implications for functional diversity. *Journal of Molecular Biology*, **1999**, 290, 61-75	6.5	177
134	Cardiac troponin T mutations result in allele-specific phenotypes in a mouse model for hypertrophic cardiomyopathy. *Journal of Clinical Investigation*, **1999**, 104, 469-81	15.9	174
133	Human cardiac myosin heavy chain genes and their linkage in the genome. *Nucleic Acids Research*, **1987**, 15, 5443-59	20.1	149
132	Alterations in cardiac adrenergic signaling and calcium cycling differentially affect the progression of cardiomyopathy. *Journal of Clinical Investigation*, **2001**, 107, 967-74	15.9	141
131	Exercise can prevent and reverse the severity of hypertrophic cardiomyopathy. *Circulation Research* , **2006**, 98, 540-8	15.7	140
130	A 29 residue region of the sarcomeric myosin rod is necessary for filament formation. *Journal of Molecular Biology*, **1997**, 266, 317-30	6.5	139
129	Cancer causes cardiac atrophy and autophagy in a sexually dimorphic manner. *Cancer Research*, **2011**, 71, 1710-20	10.1	136
128	Sex is a potent modifier of the cardiovascular system. *Journal of Clinical Investigation*, **2003**, 112, 302-307	15.9	135
127	Sex modifies exercise and cardiac adaptation in mice. *American Journal of Physiology - Heart and Circulatory Physiology*, **2004**, 287, H2768-76	5.2	133

126	Molecular Mechanisms Underlying Cardiac Adaptation to Exercise. *Cell Metabolism*, **2017**, 25, 1012-1026	24.6	124
125	Repeated intrathecal injections of plasmid DNA encoding interleukin-10 produce prolonged reversal of neuropathic pain. *Pain*, **2006**, 126, 294-308	8	120
124	Mice Expressing Mutant Myosin Heavy Chains Are a Model for Familial Hypertrophic Cardiomyopathy. *Molecular Medicine*, **1996**, 2, 556-567	6.2	119
123	Hydrogels preserve native phenotypes of valvular fibroblasts through an elasticity-regulated PI3K/AKT pathway. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 19336-41	11.5	117
122	Different pathways regulate expression of the skeletal myosin heavy chain genes. *Journal of Biological Chemistry*, **2001**, 276, 43524-33	5.4	116
121	The Importance of Biological Sex and Estrogen in Rodent Models of Cardiovascular Health and Disease. *Circulation Research*, **2016**, 118, 1294-312	15.7	116
120	Expression of the beta (slow)-isoform of MHC in the adult mouse heart causes dominant-negative functional effects. *American Journal of Physiology - Heart and Circulatory Physiology*, **2000**, 278, H412-9	5.2	111
119	Molecular consequences of the R453C hypertrophic cardiomyopathy mutation on human cardiac myosin motor function. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 12607-12	11.5	110
118	Uncoupling of expression of an intronic microRNA and its myosin host gene by exon skipping. *Molecular and Cellular Biology*, **2010**, 30, 1937-45	4.8	110
117	Hypertrophy, pathology, and molecular markers of cardiac pathogenesis. *Circulation Research*, **1998**, 82, 773-8	15.7	105
116	Pregnancy as a cardiac stress model. *Cardiovascular Research*, **2014**, 101, 561-70	9.9	104
115	Sex-based cardiac physiology. *Annual Review of Physiology*, **2009**, 71, 1-18	23.1	99
114	Fatty acids identified in the Burmese python promote beneficial cardiac growth. *Science*, **2011**, 334, 528-31	33.3	96
113	Functional diversity among a family of human skeletal muscle myosin motors. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 1053-8	11.5	74
112	Growth and muscle defects in mice lacking adult myosin heavy chain genes. *Journal of Cell Biology*, **1997**, 139, 1219-29	7.3	74
111	Loaded wheel running and muscle adaptation in the mouse. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 289, H455-65	5.2	73
110	A beta1-adrenergic receptor CaM kinase II-dependent pathway mediates cardiac myocyte fetal gene induction. *American Journal of Physiology - Heart and Circulatory Physiology*, **2006**, 291, H1299-308	5.2	70
109	Soy diet worsens heart disease in mice. *Journal of Clinical Investigation*, **2006**, 116, 209-16	15.9	69

108	Mutation of the IIB myosin heavy chain gene results in muscle fiber loss and compensatory hypertrophy. *American Journal of Physiology - Cell Physiology*, **2001**, 280, C637-45	5.4	69
107	Contractility parameters of human β-cardiac myosin with the hypertrophic cardiomyopathy mutation R403Q show loss of motor function. *Science Advances*, **2015**, 1, e1500511	14.3	68
106	Gender and aging in a transgenic mouse model of hypertrophic cardiomyopathy. *American Journal of Physiology - Heart and Circulatory Physiology*, **2001**, 280, H1136-44	5.2	67
105	Postnatal myosin heavy chain isoform expression in normal mice and mice null for IIb or IId myosin heavy chains. *Developmental Biology*, **2001**, 229, 383-95	3.1	64
104	Just 2% of SARS-CoV-2-positive individuals carry 90% of the virus circulating in communities. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	64
103	Cardiac valve cells and their microenvironment--insights from in vitro studies. *Nature Reviews Cardiology*, **2014**, 11, 715-27	14.8	62
102	miR-30 family microRNAs regulate myogenic differentiation and provide negative feedback on the microRNA pathway. *PLoS ONE*, **2015**, 10, e0118229	3.7	61
101	Akt and MAPK signaling mediate pregnancy-induced cardiac adaptation. *Journal of Applied Physiology*, **2012**, 112, 1564-75	3.7	59
100	Yin Yang 1 is increased in human heart failure and represses the activity of the human alpha-myosin heavy chain promoter. *Journal of Biological Chemistry*, **2003**, 278, 31233-9	5.4	59
99	The effects of biological sex and diet on the development of heart failure. *Circulation*, **2007**, 116, 2747-59	26.7	58
98	Hypertrophy, fibrosis, and sudden cardiac death in response to pathological stimuli in mice with mutations in cardiac troponin T. *Circulation*, **2004**, 110, 2102-9	16.7	58
97	Prolonged Cre expression driven by the α-myosin heavy chain promoter can be cardiotoxic. *Journal of Molecular and Cellular Cardiology*, **2015**, 86, 54-61	5.8	57
96	Identification of functional differences between recombinant human α and β cardiac myosin motors. *Cellular and Molecular Life Sciences*, **2012**, 69, 2261-77	10.3	54
95	Sex is a potent modifier of the cardiovascular system. *Journal of Clinical Investigation*, **2003**, 112, 302-7	15.9	54
94	Biology of the cardiac myocyte in heart disease. *Molecular Biology of the Cell*, **2016**, 27, 2149-60	3.5	53
93	PEG-Anthracene Hydrogels as an On-Demand Stiffening Matrix To Study Mechanobiology. *Angewandte Chemie - International Edition*, **2019**, 58, 9912-9916	16.4	50
92	Progression from hypertrophic to dilated cardiomyopathy in mice that express a mutant myosin transgene. *American Journal of Physiology - Heart and Circulatory Physiology*, **2001**, 280, H151-9	5.2	50
91	Spatial and temporal changes in myosin heavy chain gene expression in skeletal muscle development. *Developmental Biology*, **1999**, 216, 312-26	3.1	45

90	IIb or not IIb? Regulation of myosin heavy chain gene expression in mice and men. *Skeletal Muscle*, **2011**, 1, 5	5.1	43
89	Animal models of hypertrophic cardiomyopathy. *Current Opinion in Cardiology*, **2000**, 15, 189-96	2.1	43
88	The hypertrophic cardiomyopathy myosin mutation R453C alters ATP binding and hydrolysis of human cardiac β-myosin. *Journal of Biological Chemistry*, **2014**, 289, 5158-67	5.4	41
87	Calcineurin activity is required for cardiac remodelling in pregnancy. *Cardiovascular Research*, **2013**, 100, 402-10	9.9	40
86	Bioinformatics assessment of beta-myosin mutations reveals myosin's high sensitivity to mutations. *Trends in Cardiovascular Medicine*, **2008**, 18, 141-9	6.9	40
85	Estrogens mediate cardiac hypertrophy in a stimulus-dependent manner. *Endocrinology*, **2012**, 153, 4480-90	4.8	39
84	Shuttling of HDAC5 in H9C2 cells regulates YY1 function through CaMKIV/PKD and PP2A. *American Journal of Physiology - Cell Physiology*, **2006**, 291, C1029-37	5.4	39
83	Loss of desmin leads to impaired voluntary wheel running and treadmill exercise performance. *Journal of Applied Physiology*, **2003**, 95, 1617-22	3.7	39
82	Estrogen receptor profiling and activity in cardiac myocytes. *Molecular and Cellular Endocrinology*, **2016**, 431, 62-70	4.4	39
81	The Ku protein complex interacts with YY1, is up-regulated in human heart failure, and represses alpha myosin heavy-chain gene expression. *Molecular and Cellular Biology*, **2004**, 24, 8705-15	4.8	38
80	MyoD, Myf5, and the calcineurin pathway activate the developmental myosin heavy chain genes. *Developmental Biology*, **2006**, 294, 541-53	3.1	35
79	Skip residues modulate the structural properties of the myosin rod and guide thick filament assembly. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E3806-15	11.5	34
78	Dilated cardiomyopathy myosin mutants have reduced force-generating capacity. *Journal of Biological Chemistry*, **2018**, 293, 9017-9029	5.4	34
77	Mutations in the beta-myosin rod cause myosin storage myopathy via multiple mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 6291-6	11.5	34
76	Morphological and functional alterations in ventricular myocytes from male transgenic mice with hypertrophic cardiomyopathy. *Circulation Research*, **2004**, 94, 201-7	15.7	33
75	Myh7b/miR-499 gene expression is transcriptionally regulated by MRFs and Eos. *Nucleic Acids Research*, **2012**, 40, 7303-18	20.1	29
74	Metabolic crosstalk between the heart and liver impacts familial hypertrophic cardiomyopathy. *EMBO Molecular Medicine*, **2014**, 6, 482-95	12	28
73	Estrogenic compounds are not always cardioprotective and can be lethal in males with genetic heart disease. *Endocrinology*, **2012**, 153, 4470-9	4.8	28

72	Myosin heavy chain is not selectively decreased in murine cancer cachexia. *International Journal of Cancer*, **2012**, 130, 2722-7	7.5	27
71	Transcatheter aortic valve replacements alter circulating serum factors to mediate myofibroblast deactivation. *Science Translational Medicine*, **2019**, 11,	17.5	26
70	The Most Prevalent Freeman-Sheldon Syndrome Mutations in the Embryonic Myosin Motor Share Functional Defects. *Journal of Biological Chemistry*, **2016**, 291, 10318-31	5.4	26
69	The superfast human extraocular myosin is kinetically distinct from the fast skeletal IIa, IIb, and IId isoforms. *Journal of Biological Chemistry*, **2013**, 288, 27469-27479	5.4	25
68	Intrathecal injection of naked plasmid DNA provides long-term expression of secreted proteins. *Molecular Therapy*, **2009**, 17, 88-94	11.7	24
67	Inactivation of myosin heavy chain genes in the mouse: diverse and unexpected phenotypes. *Microscopy Research and Technique*, **2000**, 50, 492-9	2.8	24
66	Distinct cardiac transcriptional profiles defining pregnancy and exercise. *PLoS ONE*, **2012**, 7, e42297	3.7	23
65	Myoblast replication is reduced in the IUGR fetus despite maintained proliferative capacity in vitro. *Journal of Endocrinology*, **2017**, 232, 475-491	4.7	22
64	Yin Yang 1 represses alpha-myosin heavy chain gene expression in pathologic cardiac hypertrophy. *Biochemical and Biophysical Research Communications*, **2005**, 326, 79-86	3.4	22
63	Diet and sex modify exercise and cardiac adaptation in the mouse. *American Journal of Physiology - Heart and Circulatory Physiology*, **2015**, 308, H135-45	5.2	21
62	Whole transcriptome analysis of the fasting and fed Burmese python heart: insights into extreme physiological cardiac adaptation. *Physiological Genomics*, **2011**, 43, 69-76	3.6	21
61	The role of Akt/GSK-3beta signaling in familial hypertrophic cardiomyopathy. *Journal of Molecular and Cellular Cardiology*, **2009**, 46, 739-47	5.8	21
60	Blocking cardiac growth in hypertrophic cardiomyopathy induces cardiac dysfunction and decreased survival only in males. *American Journal of Physiology - Heart and Circulatory Physiology*, **2007**, 292, H838-45	5.2	21
59	Allele-specific differences in transcriptome, miRNome, and mitochondrial function in two hypertrophic cardiomyopathy mouse models. *JCI Insight*, **2018**, 3,	9.9	21
58	Suppression of eukaryotic translation termination by selected RNAs. *Rna*, **2000**, 6, 1468-79	5.8	20
57	The vertebrate myosin heavy chain: genetics and assembly properties. *Cell Structure and Function*, **1997**, 22, 123-9	2.2	20
56	Effects of pathogenic proline mutations on myosin assembly. *Journal of Molecular Biology*, **2012**, 415, 807-18	6.5	19
55	Saliva TwoStep for rapid detection of asymptomatic SARS-CoV-2 carriers. *ELife*, **2021**, 10,	8.9	19

54	Interferon-□ causes cardiac myocyte atrophy via selective degradation of myosin heavy chain in a model of chronic myocarditis. *American Journal of Pathology*, **2012**, 181, 2038-46	5.8	18
53	Saliva TwoStep for rapid detection of asymptomatic SARS-CoV-2 carriers **2021**,		18
52	Defining the Cardiac Fibroblast Secretome in a Fibrotic Microenvironment. *Journal of the American Heart Association*, **2020**, 9, e017025	6	18
51	Nuclear mechanosensing drives chromatin remodelling in persistently activated fibroblasts. *Nature Biomedical Engineering*, **2021**,	19	18
50	Transcriptome and Functional Profile of Cardiac Myocytes Is Influenced by Biological Sex. *Circulation: Cardiovascular Genetics*, **2017**, 10,		17
49	The python project: a unique model for extending research opportunities to undergraduate students. *CBE Life Sciences Education*, **2014**, 13, 698-710	3.4	17
48	Immunogenicity of intrathecal plasmid gene delivery: cytokine release and effects on transgene expression. *Journal of Gene Medicine*, **2009**, 11, 782-90	3.5	16
47	Three-dimensional encapsulation of adult mouse cardiomyocytes in hydrogels with tunable stiffness. *Progress in Biophysics and Molecular Biology*, **2020**, 154, 71-79	4.7	16
46	PEG□Anthracene Hydrogels as an On-Demand Stiffening Matrix To Study Mechanobiology. *Angewandte Chemie*, **2019**, 131, 10017-10021	3.6	14
45	Enhanced detection of tRNA isoacceptors by combinatorial oligonucleotide hybridization. *Rna*, **2000**, 6, 912-8	5.8	14
44	Differences in microRNA-29 and Pro-fibrotic Gene Expression in Mouse and Human Hypertrophic Cardiomyopathy. *Frontiers in Cardiovascular Medicine*, **2019**, 6, 170	5.4	14
43	Myosin motor domains carrying mutations implicated in early or late onset hypertrophic cardiomyopathy have similar properties. *Journal of Biological Chemistry*, **2019**, 294, 17451-17462	5.4	13
42	The ancient sarcomeric myosins found in specialized muscles. *Skeletal Muscle*, **2019**, 9, 7	5.1	13
41	Molecular events underlying pregnancy-induced cardiomyopathy. *Cell*, **2007**, 128, 437-8	56.2	11
40	Associations Between Female Sex, Sarcomere Variants, and Clinical Outcomes in Hypertrophic Cardiomyopathy. *Circulation Genomic and Precision Medicine*, **2021**, 14, e003062	5.2	10
39	Hope for a broken heart?. *Cell*, **2003**, 114, 658-9	56.2	10
38	Higher Viral Load Drives Infrequent Severe Acute Respiratory Syndrome Coronavirus 2 Transmission Between Asymptomatic Residence Hall Roommates. *Journal of Infectious Diseases*, **2021**, 224, 1316-1324	7	10
37	Matters of the heart: Cellular sex differences. *Journal of Molecular and Cellular Cardiology*, **2021**, 160, 42-55	5.8	10

36	Diversity in transcriptional start site selection and alternative splicing affects the 5′UTR of mouse striated muscle myosin transcripts. *Journal of Muscle Research and Cell Motility*, **2006**, 27, 559-75	3.5	9
35	miR-1/206 downregulates splicing factor Srsf9 to promote C2C12 differentiation. *Skeletal Muscle*, **2019**, 9, 31	5.1	9
34	Estrogen receptor-α in female skeletal muscle is not required for regulation of muscle insulin sensitivity and mitochondrial regulation. *Molecular Metabolism*, **2020**, 34, 1-15	8.8	8
33	High-resolution within-sewer SARS-CoV-2 surveillance facilitates informed intervention. *Water Research*, **2021**, 204, 117613	12.5	8
32	Spontaneous Aortic Regurgitation and Valvular Cardiomyopathy in Mice. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2015**, 35, 1653-62	9.4	7
31	miR-206 enforces a slow muscle phenotype. *Journal of Cell Science*, **2020**, 133,	5.3	7
30	Expression of Normally Repressed Myosin Heavy Chain 7b in the Mammalian Heart Induces Dilated Cardiomyopathy. *Journal of the American Heart Association*, **2019**, 8, e013318	6	7
29	Measuring microRNA reporter activity in skeletal muscle using hydrodynamic limb vein injection of plasmid DNA combined with in vivo imaging. *Skeletal Muscle*, **2013**, 3, 19	5.1	7
28	Myosin filament assembly requires a cluster of four positive residues located in the rod domain. *FEBS Letters*, **2012**, 586, 3008-12	3.8	7
27	Medicine. Chemically tuned myosin motors. *Science*, **2011**, 331, 1392-3	33.3	7
26	Interplay between exonic splicing enhancers, mRNA processing, and mRNA surveillance in the dystrophic Mdx mouse. *PLoS ONE*, **2007**, 2, e427	3.7	7
25	Expanding our scientific horizons: utilization of unique model organisms in biological research. *EMBO Journal*, **2017**, 36, 2311-2314	13	6
24	Cardiac Fibroblasts Mediate a Sexually Dimorphic Fibrotic Response to β-Adrenergic Stimulation. *Journal of the American Heart Association*, **2021**, 10, e018876	6	6
23	Estimate of the abundance of cardiomyopathic mutations in the β-myosin gene. *International Journal of Cardiology*, **2010**, 144, 124-6	3.2	5
22	Mutations in the sensitive giant titin result in a broken heart. *Circulation Research*, **2012**, 111, 158-61	15.7	5
21	Higher viral load drives infrequent SARS-CoV-2 transmission between asymptomatic residence hall roommates		5
20	High-resolution within-sewer SARS-CoV-2 surveillance facilitates informed intervention		5
19	Mechanisms of the pathogenesis of troponin T-based familial hypertrophic cardiomyopathy. *Trends in Cardiovascular Medicine*, **2003**, 13, 232-7	6.9	4

18	Just 2% of SARS-CoV-2-positive individuals carry 90% of the virus circulating in communities **2021**,		4
17	The ATPase cycle of human muscle myosin II isoforms: Adaptation of a single mechanochemical cycle for different physiological roles. *Journal of Biological Chemistry*, **2019**, 294, 14267-14278	5.4	3
16	Young at heart. *Cell*, **2013**, 153, 743-5	56.2	3
15	Pregnancy late in rodent life has detrimental effects on the heart. *American Journal of Physiology - Heart and Circulatory Physiology*, **2018**, 315, H482-H491	5.2	3
14	Genes that Escape X Chromosome Inactivation Modulate Sex Differences in Valve Myofibroblasts.. *Circulation*, **2022**,	16.7	2
13	Cardiac contraction velocity has evolved to match heart rate with body size through variation in cardiac myosin sequence		2
12	Letter to the editor: Comments on Stuart et al. (2016): "Myosin content of individual human muscle fibers isolated by laser capture microdissection". *American Journal of Physiology - Cell Physiology*, **2016**, 311, C1048-C1049	5.4	2
11	miR-206 Enforces a Slow Muscle Phenotype		1
10	Identification of sequence changes in myosin II that adjust muscle contraction velocity. *PLoS Biology*, **2021**, 19, e3001248	9.7	1
9	Myosin 7b is a regulatory long noncoding RNA (lncMYH7b) in the human heart. *Journal of Biological Chemistry*, **2021**, 296, 100694	5.4	1
8	Regression from pathological hypertrophy in mice is sexually dimorphic and stimulus-specific.. *American Journal of Physiology - Heart and Circulatory Physiology*, **2022**,	5.2	1
7	Nonproductive Splicing Prevents Expression of MYH7b Protein in the Mammalian Heart. *Journal of the American Heart Association*, **2021**, 10, e020965	6	0
6	Genetic Determinants of Exercise Performance: Evidence from Transgenic and Null Mouse Models **2010**, 185-194		
5	Edmund H. Sonnenblick (1932–2007). *Circulation Research*, **2007**, 101, 1222-1224	15.7	
4	Myosin Myopathies471-495		
3	Quantitative responses of the mouse heart to pregnancy. *FASEB Journal*, **2009**, 23, 969.7	0.9	
2	Morphological and molecular development in python model of pathological cardiac hypertrophy. *FASEB Journal*, **2010**, 24, 1036.3	0.9	
1	Signaling pathways differ in pregnancy and exercise-induced cardiac hypertrophy. *FASEB Journal*, **2011**, 25, 1059.11	0.9	