Richard L Lieber

List of Publications by Year
in descending order

285 papers	17,428 citations	16451 64 h-index	19190 118 g-index
293 all docs	293 docs citations	293 times ranked	12389 citing authors

#	Article	IF	Citations
1	Functional and clinical significance of skeletal muscle architecture. Muscle and Nerve, 2000, 23, 1647-1666.	2.2	928
2	Structure and function of the skeletal muscle extracellular matrix. Muscle and Nerve, 2011, 44, 318-331.	2.2	716
3	A Model of the Lower Limb for Analysis of Human Movement. Annals of Biomedical Engineering, 2010, 38, 269-279.	2.5	659
4	Cerebral palsy. Nature Reviews Disease Primers, 2016, 2, 15082.	30.5	603
5	Are Current Measurements of Lower Extremity Muscle Architecture Accurate?. Clinical Orthopaedics and Related Research, 2009, 467, 1074-1082.	1.5	520
6	Relationship between muscle fiber types and sizes and muscle architectural properties in the mouse hindlimb. Journal of Morphology, 1994, 221, 177-190.	1.2	426
7	Hamstring contractures in children with spastic cerebral palsy result from a stiffer extracellular matrix and increased in vivo sarcomere length. Journal of Physiology, 2011, 589, 2625-2639.	2.9	353
8	Structural and mechanical basis of exercise-induced muscle injury. Medicine and Science in Sports and Exercise, 1992, 24, 521???530.	0.4	342
9	Structural and functional changes in spastic skeletal muscle. Muscle and Nerve, 2004, 29, 615-627.	2.2	332
10	Architecture of selected muscles of the arm and forearm: Anatomy and implications for tendon transfer. Journal of Hand Surgery, 1992, 17, 787-798.	1.6	314
11	Spastic muscle cells are shorter and stiffer than normal cells. Muscle and Nerve, 2003, 27, 157-164.	2.2	307
12	Skeletal muscle design to meet functional demands. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 1466-1476.	4.0	251
13	Architecture of selected wrist flexor and extensor muscles. Journal of Hand Surgery, 1990, 15, 244-250.	1.6	242
14	Cellular Mechanisms of Tissue Fibrosis. 4. Structural and functional consequences of skeletal muscle fibrosis. American Journal of Physiology - Cell Physiology, 2013, 305, C241-C252.	4.6	233
15	Architectural Analysis and Intraoperative Measurements Demonstrate the Unique Design of the Multifidus Muscle for Lumbar Spine Stability. Journal of Bone and Joint Surgery - Series A, 2009, 91, 176-185.	3.0	221
16	Density and hydration of fresh and fixed human skeletal muscle. Journal of Biomechanics, 2005, 38, 2317-2320.	2.1	209
17	Inferior mechanical properties of spastic muscle bundles due to hypertrophic but compromised extracellular matrix material. Muscle and Nerve, 2003, 28, 464-471.	2.2	198
18	Nebulin-deficient mice exhibit shorter thin filament lengths and reduced contractile function in skeletal muscle. Journal of Cell Biology, 2006, 173, 905-916.	5.2	195

#	Article	IF	Citations
19	Spasticity causes a fundamental rearrangement of muscle-joint interaction. Muscle and Nerve, 2002, 25, 265-270.	2.2	177
20	Clinical Significance of Skeletal Muscle Architecture. Clinical Orthopaedics and Related Research, 2001, 383, 140-151.	1.5	172
21	Architectural design of the human intrinsic hand muscles. Journal of Hand Surgery, 1992, 17, 804-809.	1.6	170
22	Correlation between active and passive isometric force and intramuscular pressure in the isolated rabbit tibialis anterior muscle. Journal of Biomechanics, 2003, 36, 505-512.	2.1	164
23	Scaling of muscle architecture and fiber types in the rat hindlimb. Journal of Experimental Biology, 2008, 211, 2336-2345.	1.7	155
24	Skeletal muscle architecture of the rabbit hindlimb: Functional implications of muscle design. Journal of Morphology, 1989, 199, 93-101.	1.2	151
25	12 Force Transmission in Skeletal Muscle. Exercise and Sport Sciences Reviews, 1997, 25, 321???364.	3.0	151
26	Elucidation of extracellular matrix mechanics from muscle fibers and fiber bundles. Journal of Biomechanics, 2011, 44, 771-773.	2.1	150
27	Segmental muscle fiber lesions after repetitive eccentric contractions. Cell and Tissue Research, 1998, 293, 165-171.	2.9	145
28	Structural and mechanical alterations in spastic skeletal muscle. Developmental Medicine and Child Neurology, 2005, 47, 713.	2.1	136
29	Pathophysiology of Muscle Contractures in Cerebral Palsy. Physical Medicine and Rehabilitation Clinics of North America, 2015, 26, 57-67.	1.3	135
30	Nesprin 1 is critical for nuclear positioning and anchorage. Human Molecular Genetics, 2010, 19, 329-341.	2.9	131
31	Rapid muscle-specific gene expression changes after a single bout of eccentric contractions in the mouse. American Journal of Physiology - Cell Physiology, 2004, 286, C355-C364.	4.6	130
32	Obscurin determines the architecture of the longitudinal sarcoplasmic reticulum. Journal of Cell Science, 2009, 122, 2640-2650.	2.0	120
33	Statistical significance and statistical power in hypothesis testing. Journal of Orthopaedic Research, 1990, 8, 304-309.	2.3	117
34	Whole muscle length-tension relationships are accurately modeled as scaled sarcomeres in rabbit hindlimb muscles. Journal of Biomechanics, 2011, 44, 109-115.	2.1	116
35	Desmin knockout muscles generate lower stress and are less vulnerable to injury compared with wild-type muscles. American Journal of Physiology - Cell Physiology, 2000, 279, C1116-C1122.	4.6	112
36	Structural and Functional Roles of Desmin in Mouse Skeletal Muscle during Passive Deformation. Biophysical Journal, 2004, 86, 2993-3008.	0.5	112

#	Article	IF	Citations
37	Method for Decellularizing Skeletal Muscle Without Detergents or Proteolytic Enzymes. Tissue Engineering - Part C: Methods, 2011, 17, 383-389.	2.1	109
38	Mechanical Strength of the Side-to-Side Versus Pulvertaft Weave Tendon Repair. Journal of Hand Surgery, 2010, 35, 540-545.	1.6	102
39	Skeletal muscle mechanics, energetics and plasticity. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 108.	4.6	99
40	Quantitative analysis of neonatal skeletal muscle functional improvement in the mouse. Journal of Experimental Biology, 2008, 211, 837-843.	1.7	98
41	Passive mechanical properties of the lumbar multifidus muscle support its role as a stabilizer. Journal of Biomechanics, 2009, 42, 1384-1389.	2.1	97
42	Tendon biomechanical properties enhance human wrist muscle specialization. Journal of Biomechanics, 1995, 28, 791-799.	2.1	95
43	Desmin cytoskeletal modifications after a bout of eccentric exercise in the rat. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2002, 283, R958-R963.	1.8	92
44	Predicted effects of metacarpal shortening on interosseous muscle function. Journal of Hand Surgery, 2004, 29, 689-693.	1.6	92
45	DNA-PK Promotes the Mitochondrial, Metabolic, and Physical Decline that Occurs During Aging. Cell Metabolism, 2017, 25, 1135-1146.e7.	16.2	92
46	Morphologic and Mechanical Basis of Delayed-Onset Muscle Soreness. Journal of the American Academy of Orthopaedic Surgeons, The, 2002, 10, 67-73.	2.5	91
47	Long-term effects of spinal cord transection on fast and slow rat skeletal muscle. Experimental Neurology, 1986, 91, 435-448.	4.1	90
48	Effects of Muscle Contraction on the Load-Strain Properties of Frog Aponeurosis and Tendon. Cells Tissues Organs, 2000, 166, 48-54.	2.3	89
49	Asynchronous Functional, Cellular and Transcriptional Changes after a Bout of Eccentric Exercise in the Rat. Journal of Physiology, 2003, 553, 947-957.	2.9	87
50	Skeletal muscle fibroblasts in health and disease. Differentiation, 2016, 92, 108-115.	1.9	86
51	Mechanisms of Muscle Injury Gleaned from Animal Models. American Journal of Physical Medicine and Rehabilitation, 2002, 81, S70-S79.	1.4	85
52	Skeletal muscle response to tenotomy. Muscle and Nerve, 2000, 23, 851-862.	2.2	84
53	Novel transcriptional profile in wrist muscles from cerebral palsy patients. BMC Medical Genomics, 2009, 2, 44.	1.5	84
54	High resolution muscle measurements provide insights into equinus contractures in patients with cerebral palsy. Journal of Orthopaedic Research, 2015, 33, 33-39.	2.3	84

#	Article	IF	Citations
55	Tissue fluid pressures: From basic research tools to clinical applications. Journal of Orthopaedic Research, 1989, 7, 902-909.	2.3	82
56	Reduced satellite cell population may lead to contractures in children with cerebral palsy. Developmental Medicine and Child Neurology, 2013, 55, 264-270.	2.1	81
57	Long-term effects of spinal cord transection on fast and slow rat skeletal muscle. Experimental Neurology, 1986, 91, 423-434.	4.1	77
58	Structural and regulatory roles of muscle ankyrin repeat protein family in skeletal muscle. American Journal of Physiology - Cell Physiology, 2007, 293, C218-C227.	4.6	76
59	Cytoskeletal Disruption After Eccentric Contraction-Induced Muscle Injury. Clinical Orthopaedics and Related Research, 2002, 403, S90-S99.	1.5	75
60	CASE REPORT: Muscle Adaptation by Serial Sarcomere Addition 1 Year after Femoral Lengthening. Clinical Orthopaedics and Related Research, 2007, 456, 250-253.	1.5	75
61	Tropomodulin isoforms regulate thin filament pointed-end capping and skeletal muscle physiology. Journal of Cell Biology, 2010, 189, 95-109.	5.2	74
62	Sarcomere length measurement permits high resolution normalization of muscle fiber length in architectural studies. Journal of Experimental Biology, 2005, 208, 3275-3279.	1.7	71
63	Model of muscle-tendon interaction during frog semitendinosis fixed-end contractions. Journal of Biomechanics, 1992, 25, 421-428.	2.1	68
64	Evidence for muscle attachment at relatively long lengths in tendon transfer surgery. Journal of Hand Surgery, 1998, 23, 105-110.	1.6	67
65	Skeletal muscle satellite cells: Mediators of muscle growth during development and implications for developmental disorders. Muscle and Nerve, 2014, 50, 723-732.	2.2	65
66	Muscle contracture and passive mechanics in cerebral palsy. Journal of Applied Physiology, 2019, 126, 1492-1501.	2.5	64
67	Reduced thin filament length in nebulin-knockout skeletal muscle alters isometric contractile properties. American Journal of Physiology - Cell Physiology, 2009, 296, C1123-C1132.	4.6	63
68	Stiff muscle fibers in calf muscles of patients with cerebral palsy lead to high passive muscle stiffness. Journal of Orthopaedic Research, 2014, 32, 1667-1674.	2.3	63
69	Reduced satellite cell number in situ in muscular contractures from children with cerebral palsy. Journal of Orthopaedic Research, 2015, 33, 1039-1045.	2.3	63
70	Impact of vaginal parity and aging on the architectural design of pelvic floor muscles. American Journal of Obstetrics and Gynecology, 2016, 215, 312.e1-312.e9.	1.3	62
71	Nebulin plays a direct role in promoting strong actinâ€myosin interactions. FASEB Journal, 2009, 23, 4117-4125.	0.5	61
72	Automating sleep stage classification using wireless, wearable sensors. Npj Digital Medicine, 2019, 2, 131.	10.9	60

#	Article	IF	Citations
73	Local compression patterns beneath pneumatic tourniquets applied to arms and thighs of human cadavera. Journal of Orthopaedic Research, 1987, 5, 247-252.	2.3	59
74	Physiologic consequences of surgical lengthening of extensor carpi radialis brevis muscle-tendon junction for tennis elbow. Journal of Hand Surgery, 1994, 19, 269-274.	1.6	59
75	Differential response of the dog quadriceps muscle to external skeletal fixation of the knee. Muscle and Nerve, 1988, 11, 193-201.	2.2	57
76	Biomechanical Analysis of the Brachioradialis as a Donor in Tendon Transfer. Clinical Orthopaedics and Related Research, 2001, 383, 152-161.	1.5	56
77	Stress-dependent and -independent expression of the myogenic regulatory factors and theMARPgenes after eccentric contractions in rats. Journal of Physiology, 2006, 570, 157-167.	2.9	56
78	Systems analysis of biological networks in skeletal muscle function. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2013, 5, 55-71.	6.6	56
79	High resolution threeâ€dimensional reconstruction of fibrotic skeletal muscle extracellular matrix. Journal of Physiology, 2017, 595, 1159-1171.	2.9	56
80	Skeletal Muscle Architecture. Journal of Hand Therapy, 1993, 6, 105-113.	1.5	54
81	Biomechanical properties of the brachioradialis muscle: Implications for surgical tendon transfer. Journal of Hand Surgery, 2005, 30, 273-282.	1.6	54
82	ISSLS Prize Winner. Spine, 2011, 36, 1728-1736.	2.0	54
83	Pregnancy-induced adaptations in the intrinsic structure of rat pelvic floor muscles. American Journal of Obstetrics and Gynecology, 2015, 213, 191.e1-191.e7.	1.3	54
84	Muscle LIM protein plays both structural and functional roles in skeletal muscle. American Journal of Physiology - Cell Physiology, 2005, 289, C1312-C1320.	4.6	53
85	Interaction between series compliance and sarcomere kinetics determines internal sarcomere shortening during fixed-end contraction. Journal of Biomechanics, 2000, 33, 1249-1255.	2.1	52
86	Human skeletal muscle biochemical diversity. Journal of Experimental Biology, 2012, 215, 2551-2559.	1.7	52
87	Disruption of both nesprin 1 and desmin results in nuclear anchorage defects and fibrosis in skeletal muscle. Human Molecular Genetics, 2014, 23, 5879-5892.	2.9	52
88	Skeletal muscle fibrosis develops in response to desmin deletion. American Journal of Physiology - Cell Physiology, 2012, 302, C1609-C1620.	4.6	51
89	Muscle intermediate filaments form a stress-transmitting and stress- signaling network in muscle. Journal of Cell Science, 2015, 128, 219-24.	2.0	51
90	Frog muscle fibers bear a larger fraction of passive muscle tension than mouse fibers. Journal of Experimental Biology, 2018, 221, .	1.7	51

#	Article	IF	Citations
91	SKELETAL MUSCLE ADAPTABILITY. I: REVIEW OF BASIC PROPERTIES. Developmental Medicine and Child Neurology, 1986, 28, 390-397.	2.1	50
92	Transcriptional Abnormalities of Hamstring Muscle Contractures in Children with Cerebral Palsy. PLoS ONE, 2012, 7, e40686.	2.5	50
93	Comparison of rotator cuff muscle architecture among humans and selected vertebrate species. Journal of Experimental Biology, 2014, 217, 261-73.	1.7	50
94	Sarcomere length in wrist extensor muscles Changes may provide insights into the etiology of chronic lateral epicondylitis. Acta Orthopaedica, 1997, 68, 249-254.	1.4	49
95	Intraoperative muscle measurements reveal a relationship between contracture formation and muscle remodeling. Muscle and Nerve, 2007, 36, 47-54.	2.2	49
96	Increased efficacy and decreased systemicâ€effects of botulinum toxin A injection after active or passive muscle manipulation. Developmental Medicine and Child Neurology, 2007, 49, 907-914.	2.1	49
97	Plasticity of Muscle Architecture After Supraspinatus Tears. Journal of Orthopaedic and Sports Physical Therapy, 2010, 40, 729-735.	3.5	49
98	Three distinct cell populations express extracellular matrix proteins and increase in number during skeletal muscle fibrosis. American Journal of Physiology - Cell Physiology, 2017, 312, C131-C143.	4.6	49
99	Psoas Muscle Architectural Design, In Vivo Sarcomere Length Range, and Passive Tensile Properties Support Its Role as a Lumbar Spine Stabilizer. Spine, 2011, 36, E1666-E1674.	2.0	48
100	Contribution of denervated muscle to contractures after neonatal brachial plexus injury: Not just muscle fibrosis. Muscle and Nerve, 2014, 49, 398-404.	2.2	48
101	A model of semitendinosus muscle sarcomere length, knee and hip joint interaction in the frog hindlimb. Journal of Biomechanics, 1990, 23, 271-279.	2.1	47
102	Finite element model of intramuscular pressure during isometric contraction of skeletal muscle. Physics in Medicine and Biology, 2002, 47, 4043-4061.	3.0	47
103	Progressive myopathy and defects in the maintenance of myotendinous junctions in mice that lack talin 1 in skeletal muscle. Development (Cambridge), 2008, 135, 2043-2053.	2.5	47
104	Architectural Analysis of Human Abdominal Wall Muscles. Spine, 2010, 36, 1.	2.0	47
105	Four novel myosin heavy chain transcripts define a molecular basis for muscle fibre types inRanapipiens. Journal of Physiology, 1998, 508, 667-680.	2.9	46
106	Dramatic changes in muscle contractile and structural properties after 2 botulinum toxin injections. Muscle and Nerve, 2015, 52, 649-657.	2.2	46
107	Anatomical, architectural, and biochemical diversity of the murine forelimb muscles. Journal of Anatomy, 2012, 221, 443-451.	1.5	45
108	Sarcomere Length changes after flexor carpi ulnaris to extensor digitorum communis tendon transfer. Journal of Hand Surgery, 1996, 21, 612-618.	1.6	44

#	Article	IF	Citations
109	Muscle Injury, Vimentin Expression, and Nonsteroidal Antiâ€inflammatory Drugs Predispose to Cryptic Group A Streptococcal Necrotizing Infection. Journal of Infectious Diseases, 2008, 198, 1692-1698.	4.0	44
110	Passive mechanical properties and related proteins change with botulinum neurotoxin A injection of normal skeletal muscle. Journal of Orthopaedic Research, 2012, 30, 497-502.	2.3	44
111	Quantitative analysis of muscle fibre type and myosin heavy chain distribution in the frog hindlimb: implications for locomotory design. Journal of Muscle Research and Cell Motility, 1998, 19, 717-731.	2.0	43
112	Protection of the deltoid to triceps tendon transfer repair sites. Journal of Hand Surgery, 2000, 25, 144-149.	1.6	43
113	Asynchronous Muscle and Tendon Adaptation After Surgical Tensioning Procedures. Journal of Bone and Joint Surgery - Series A, 2010, 92, 664-674.	3.0	43
114	Musculoskeletal balance of the human wrist elucidated using intraoperative laser diffraction. Journal of Electromyography and Kinesiology, 1998, 8, 93-100.	1.7	42
115	Quantitative evaluation of the posterior deltoid to triceps tendon transfer based on muscle architectural properties. Journal of Hand Surgery, 2001, 26, 147-155.	1.6	41
116	Spastic wrist flexors are more severely affected than wrist extensors in children with cerebral palsy. Developmental Medicine and Child Neurology, 2005, 47, 384-389.	2.1	41
117	Loss of FHL1 induces an age-dependent skeletal muscle myopathy associated with myofibrillar and intermyofibrillar disorganization in mice. Human Molecular Genetics, 2014, 23, 209-225.	2.9	41
118	Reduced skeletal muscle satellite cell number alters muscle morphology after chronic stretch but allows limited serial sarcomere addition. Muscle and Nerve, 2017, 55, 384-392.	2.2	41
119	Non-linear Scaling of Passive Mechanical Properties in Fibers, Bundles, Fascicles and Whole Rabbit Muscles. Frontiers in Physiology, 2020, 11, 211.	2.8	41
120	Sarcomere strain and heterogeneity correlate with injury to frog skeletal muscle fiber bundles. Journal of Applied Physiology, 2004, 97, 1803-1813.	2.5	40
121	Effect of muscle tension during tendon transfer on sarcomerogenesis in a rabbit model. Journal of Hand Surgery, 2000, 25, 138-143.	1.6	39
122	Tendon Transfer Surgery: Clinical Implications of Experimental Studies. Clinical Orthopaedics and Related Research, 2002, 403, S163-S170.	1.5	39
123	Inpatient stroke rehabilitation: prediction of clinical outcomes using a machine-learning approach. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 71.	4.6	39
124	Evidence for increased myofibrillar mobility in desmin-null mouse skeletal muscle. Journal of Experimental Biology, 2002, 205, 321-325.	1.7	39
125	Stepwise regression is an alternative to splines for fitting noisy data. Journal of Biomechanics, 1996, 29, 235-238.	2.1	38
126	Performance characteristics of a pressure microsensor. Journal of Biomechanics, 2003, 36, 283-287.	2.1	38

#	Article	IF	Citations
127	3D-printed biomaterials with regional auxetic properties. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 76, 145-152.	3.1	38
128	Quantitative method for comparison of skeletal muscle architectural properties. Journal of Biomechanics, 1992, 25, 557-560.	2.1	37
129	Synovial fluid nutrient delivery in the diathrial joint: An analysis of rabbit knee ligaments. Journal of Orthopaedic Research, 1986, 4, 90-95.	2.3	36
130	Mechanical considerations in the design of surgical reconstructive procedures. Journal of Biomechanics, 2002, 35, 1039-1045.	2.1	36
131	Passive mechanical properties of rat abdominal wall muscles suggest an important role of the extracellular connective tissue matrix. Journal of Orthopaedic Research, 2012, 30, 1321-1326.	2.3	36
132	Collagen crosslinking does not dictate stiffness in a transgenic mouse model of skeletal muscle fibrosis. Journal of Biomechanics, 2015, 48, 375-378.	2.1	36
133	Pregnancy-induced adaptations in intramuscular extracellular matrix of rat pelvic floor muscles. American Journal of Obstetrics and Gynecology, 2016, 215, 210.e1-210.e7.	1.3	36
134	Biomechanical response of skeletal muscle to eccentric contractions. Journal of Sport and Health Science, 2018, 7, 294-309.	6.5	35
135	Loss of myogenic potential and fusion capacity of muscle stem cells isolated from contractured muscle in children with cerebral palsy. American Journal of Physiology - Cell Physiology, 2018, 315, C247-C257.	4.6	35
136	SKELETAL MUSCLE ADAPTABILITY. III: MUSCLE PROPERTIES FOLLOWING CHRONIC ELECTRICAL STIMULATION. Developmental Medicine and Child Neurology, 1986, 28, 662-670.	2.1	34
137	Evidence for increased myofibrillar mobility in desmin-null mouse skeletal muscle. Journal of Experimental Biology, 2002, 205, 321-5.	1.7	34
138	Systems analysis of transcriptional data provides insights into muscle's biological response to botulinum toxin. Muscle and Nerve, 2014, 50, 744-758.	2.2	33
139	Skeletal muscle recovery after tenotomy and 7-day delayed muscle length restoration. , 2000, 23, 707-714.		32
140	Simultaneous Imaging and Functional Assessment of Cytoskeletal Protein Connections in Passively Loaded Single Muscle Cells. Journal of Histochemistry and Cytochemistry, 2003, 51, 19-29.	2.5	32
141	Syncoilin is required for generating maximum isometric stress in skeletal muscle but dispensable for muscle cytoarchitecture. American Journal of Physiology - Cell Physiology, 2008, 294, C1175-C1182.	4.6	32
142	Contribution of extracellular matrix components to the stiffness of skeletal muscle contractures in patients with cerebral palsy. Connective Tissue Research, 2021, 62, 287-298.	2.3	32
143	Influence of myosin isoforms on contractile properties of intact muscle fibers fromRana pipiens. American Journal of Physiology - Cell Physiology, 2002, 282, C835-C844.	4.6	31
144	Muscle extracellular matrix applies a transverse stress on fibers with axial strain. Journal of Biomechanics, 2011, 44, 1618-1620.	2.1	31

#	Article	IF	Citations
145	The nebulin SH3 domain is dispensable for normal skeletal muscle structure but is required for effective active load bearing in mouse. Journal of Cell Science, 2013, 126, 5477-89.	2.0	31
146	Comparison of pelvic muscle architecture between humans and commonly used laboratory species. International Urogynecology Journal, 2014, 25, 1507-1515.	1.4	30
147	Miniaturized wireless, skin-integrated sensor networks for quantifying full-body movement behaviors and vital signs in infants. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	30
148	Length-tension relationship of the external anal sphincter muscle: implications for the anal canal function. American Journal of Physiology - Renal Physiology, 2008, 295, G367-G373.	3.4	29
149	Correlation between isometric force and intramuscular pressure in rabbit tibialis anterior muscle with an intact anterior compartment. Muscle and Nerve, 2009, 40, 79-85.	2.2	29
150	Intrinsic Hand Muscle Function, PartÂ1:ÂCreatingÂaÂFunctional Grasp. Journal of Hand Surgery, 2013, 38, 2093-2099.	1.6	29
151	The mechanical strength of side-to-side tendon repair with mismatched tendon size and shape. Journal of Hand Surgery: European Volume, 2015, 40, 239-245.	1.0	29
152	High Stiffness of Human Digital Flexor Tendons Is Suited for Precise Finger Positional Control. Journal of Neurophysiology, 2006, 96, 2815-2818.	1.8	28
153	Muscle Gene Expression Patterns in Human Rotator Cuff Pathology. Journal of Bone and Joint Surgery - Series A, 2014, 96, 1558-1565.	3.0	28
154	Effect of Supraspinatus Tendon Injury on Supraspinatus and Infraspinatus Muscle Passive Tension and Associated Biochemistry. Journal of Bone and Joint Surgery - Series A, 2014, 96, e175.	3.0	28
155	Augmenting Clinical Outcome Measures of Gait and Balance with a Single Inertial Sensor in Age-Ranged Healthy Adults. Sensors, 2019, 19, 4537.	3.8	28
156	SKELETAL MUSCLE ADAPTABILITY, II: MUSCLE PROPERTIES FOLLOWING SPINALâ€CORD INJURY. Developmental Medicine and Child Neurology, 1986, 28, 533-542.	2.1	27
157	Quantification of Partial or Complete A4 Pulley Release With FDP Repair in Cadaveric Tendons. Journal of Hand Surgery, 2011, 36, 439-445.	1.6	27
158	Muscle wasting and adipose tissue browning in infantile nephropathic cystinosis. Journal of Cachexia, Sarcopenia and Muscle, 2016, 7, 152-164.	7.3	27
159	Light diffraction studies of active muscle fibres as a function of sarcomere length. Journal of Muscle Research and Cell Motility, 1981, 2, 215-224.	2.0	26
160	Myopalladin promotes muscle growth through modulation of the serum response factor pathway. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 169-194.	7.3	26
161	Vitamin D repletion ameliorates adipose tissue browning and muscle wasting in infantile nephropathic cystinosisâ€associated cachexia. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 120-134.	7.3	26
162	Myosin isoforms in anuran skeletal muscle: Their influence on contractile properties and in vivo muscle function. Microscopy Research and Technique, 2000, 50, 443-457.	2.2	25

#	Article	IF	Citations
163	In vitro cyclic tensile testing of combined peripheral and core flexor tenorrhaphy suture techniques. Journal of Hand Surgery, 2002, 27, 518-524.	1.6	25
164	Fiber length variability within the flexor carpi ulnaris and flexor carpi radialis muscles: implications for surgical tendon transfer. Journal of Hand Surgery, 2004, 29, 909-914.	1.6	25
165	Pronator Teres Is an Appropriate Donor Muscle for Restoration of Wrist and Thumb Extension. Journal of Hand Surgery, 2005, 30, 1068-1073.	1.6	25
166	Variability in Surgical Technique for Brachioradialis Tendon Transfer<sbt aid="1121202">Evidence and Implications</sbt>. Journal of Bone and Joint Surgery - Series A, 2006, 88, 2009.	3.0	25
167	Architectural and morphological assessment of rat abdominal wall muscles: comparison for use as a human model. Journal of Anatomy, 2010, 217, 196-202.	1.5	25
168	Muscle geometry affects accuracy of forearm volume determination by magnetic resonance imaging (MRI). Journal of Biomechanics, 2007, 40, 3261-3266.	2.1	24
169	Theoretical Predictions of the Effects of Force Transmission by Desmin on Intersarcomere Dynamics. Biophysical Journal, 2010, 98, 258-266.	0.5	24
170	Architectural design of the pelvic floor is consistent with muscle functional subspecialization. International Urogynecology Journal, 2014, 25, 205-212.	1.4	24
171	Analysis of posterior deltoid function one year after surgical restoration of elbow extension. Journal of Hand Surgery, 2003, 28, 288-293.	1.6	23
172	Three-Dimensional Reconstruction of Skeletal Muscle Extracellular Matrix Ultrastructure. Microscopy and Microanalysis, 2014, 20, 1835-1840.	0.4	23
173	Biochemical and structural basis of the passive mechanical properties of whole skeletal muscle. Journal of Physiology, 2021, 599, 3809-3823.	2.9	23
174	Can we just forget about pennation angle?. Journal of Biomechanics, 2022, 132, 110954.	2.1	23
175	Relationship between muscle stress and intramuscular pressure during dynamic muscle contractions. Muscle and Nerve, 2007, 36, 313-319.	2.2	22
176	Recovery of rat muscle size but not function more than 1 year after a single botulinum toxin injection. Muscle and Nerve, 2018, 57, 435-441.	2.2	22
177	Identification of myosin light chains in Rana pipiens skeletal muscle and their expression patterns along single fibres. Journal of Experimental Biology, 2001, 204, 4237-4248.	1.7	22
178	A novel muscle biopsy clamp yields accurate in vivo sarcomere length values. Journal of Biomechanics, 2009, 42, 193-196.	2.1	21
179	Mechanical Feasibility of Immediate Mobilization of the Brachioradialis Muscle After Tendon Transfer. Journal of Hand Surgery, 2010, 35, 1473-1478.	1.6	21
180	Sarcomere Length Changes During Fish Swimming. Journal of Experimental Biology, 1992, 169, 251-254.	1.7	21

#	Article	IF	Citations
181	Decreased Muscle Speed, Strength and Fatigability Following two Hours of Tourniquet-Induced Ischaemia. Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery, 1992, 26, 127-132.	0.6	20
182	Sarcomere length varies with wrist ulnar deviation but not forearm pronation in the extensor carpi radialis brevis muscle. Journal of Biomechanics, 1999, 32, 199-202.	2.1	20
183	Intraoperative and biomechanical studies of human vastus lateralis and vastus medialis sarcomere length operating range. Journal of Biomechanics, 2018, 67, 91-97.	2.1	20
184	Vitamin D ameliorates adipose browning in chronic kidney disease cachexia. Scientific Reports, 2020, 10, 14175.	3.3	20
185	The 2002 Nicolas Andry Award: Implications of Muscle Design on Surgical Reconstruction of Upper Extremities. Clinical Orthopaedics and Related Research, 2004, 419, 267-279.	1.5	19
186	Biology and Mechanics of Skeletal Muscle: What Hand Surgeons Need to Know When Tensioning a Tendon Transfer. Journal of Hand Surgery, 2008, 33, 1655-1656.	1.6	19
187	Regional Myosin Heavy Chain Distribution in Selected Paraspinal Muscles. Spine, 2010, 35, 1265-1270.	2.0	19
188	Skeletal muscle fiberâ€type specific succinate dehydrogenase activity in cerebral palsy. Muscle and Nerve, 2017, 55, 122-124.	2.2	19
189	High-Speed Digital Data Acquisition of Sarcomere Length from Isolated Skeletal and Cardiac Muscle Cells. IEEE Transactions on Biomedical Engineering, 1983, BME-30, 50-57.	4.2	18
190	Dorsal Transfer of the Brachioradialis to the Flexor Pollicis Longus Enables Simultaneous Powering of Key Pinch and Forearm Pronation. Journal of Hand Surgery, 2006, 31, 993-997.	1.6	17
191	Analysis of hierarchical biomechanical data structures using mixed-effects models. Journal of Biomechanics, 2018, 69, 34-39.	2.1	17
192	Architecture of the Short External Rotator Muscles of the Hip. BMC Musculoskeletal Disorders, 2019, 20, 611.	1.9	17
193	Simultaneous stiffness and force measurements reveal subtle injury to rabbit soleus muscles. Molecular and Cellular Biochemistry, 1998, 179, 147-158.	3.1	16
194	Sustained Improvement in the Anal Sphincter Function Following Surgical Plication of Rabbit External Anal Sphincter Muscle. Diseases of the Colon and Rectum, 2011, 54, 1373-1380.	1.3	16
195	Moment arms of the human digital flexors. Journal of Biomechanics, 2011, 44, 1987-1990.	2.1	16
196	Intrinsic Hand Muscle Function, Part 2: Kinematic Comparison of 2 Reconstructive Procedures. Journal of Hand Surgery, 2013, 38, 2100-2105.e1.	1.6	16
197	Functional Consequence of Distal Brachioradialis Tendon Release: A Biomechanical Study. Journal of Hand Surgery, 2013, 38, 920-926.	1.6	16
198	Sarcomere length distribution quantification in whole muscle frozen sections. Journal of Experimental Biology, 2016, 219, 1432-6.	1.7	15

#	Article	IF	Citations
199	Systematic review of skeletal muscle passive mechanics experimental methodology. Journal of Biomechanics, 2021, 129, 110839.	2.1	15
200	Muscle excursion does not correlate with increased serial sarcomere number after muscle adaptation to stretched tendon transfer. Journal of Orthopaedic Research, 2012, 30, 1774-1780.	2.3	14
201	Reach out and grasp the opportunity: reconstructive hand surgery in tetraplegia. Journal of Hand Surgery: European Volume, 2019, 44, 343-353.	1.0	14
202	Intramuscular Anatomy Drives Collagen Content Variation Within and Between Muscles. Frontiers in Physiology, 2020, 11, 293.	2.8	14
203	Real-time acquisition and data analysis of skeletal muscle contraction in a multi-user environment. Computer Methods and Programs in Biomedicine, 1986, 22, 259-265.	4.7	13
204	Differential expression of neural cell adhesion molecule (NCAM) after tenotomy in rabbit skeletal muscle. Journal of Orthopaedic Research, 2002, 20, 364-369.	2.3	13
205	Intraoperative Single-Site Sarcomere Length Measurement Accurately Reflects Whole-Muscle Sarcomere Length in the Rabbit. Journal of Hand Surgery, 2007, 32, 612-617.	1.6	13
206	InÂVivo Sarcomere Length Measurement in Whole Muscles during Passive Stretch and Twitch Contractions. Biophysical Journal, 2017, 112, 805-812.	0.5	13
207	Design Considerations of a Fiber Optic Pressure Sensor Protective Housing for Intramuscular Pressure Measurements. Annals of Biomedical Engineering, 2017, 45, 739-746.	2.5	13
208	Does a Reduced Number of Muscle Stem Cells Impair the Addition of Sarcomeres and Recovery from a Skeletal Muscle Contracture? A Transgenic Mouse Model. Clinical Orthopaedics and Related Research, 2020, 478, 886-899.	1.5	13
209	Conference report on contractures in musculoskeletal and neurological conditions. Muscle and Nerve, 2020, 61, 740-744.	2.2	13
210	Rehabilitation Research at the National Institutes of Health. Neurorehabilitation and Neural Repair, 2017, 31, 304-314.	2.9	12
211	Spinal Hyper-Excitability and Altered Muscle Structure Contribute to Muscle Hypertonia in Newborns After Antenatal Hypoxia-Ischemia in a Rabbit Cerebral Palsy Model. Frontiers in Neurology, 2019, 9, 1183.	2.4	12
212	In vivo human gracilis whole-muscle passive stressâ€“sarcomere strain relationship. Journal of Experimental Biology, 2021, 224, .	1.7	12
213	Role of the cytoskeleton in muscle transcriptional responses to altered use. Physiological Genomics, 2013, 45, 321-331.	2.3	11
214	Post-mortem timing of skeletal muscle biochemical and mechanical degradation. Journal of Biomechanics, 2014, 47, 1506-1509.	2.1	11
215	Lmo7 is dispensable for skeletal muscle and cardiac function. American Journal of Physiology - Cell Physiology, 2015, 309, C470-C479.	4.6	11
216	Cloning and characterization of the S1 domain of four myosin isoforms from functionally divergent fiber types in adult Rana pipiens skeletal muscle. Gene, 2000, 250, 97-107.	2.2	10

#	Article	IF	Citations
217	Systematic test of neurotoxin dose and volume on muscle function in a rat model. Muscle and Nerve, 2014, 49, 709-715.	2.2	10
218	Skeletal muscle maximal mitochondrial activity in ambulatory children with cerebral palsy. Developmental Medicine and Child Neurology, 2021, 63, 1194-1203.	2.1	10
219	Hypothesis: Biarticular Muscles Transfer Moments Between Joints. Developmental Medicine and Child Neurology, 1990, 32, 456-458.	2.1	9
220	Pragmatic adaptation of implementation research measures for a novel context and multiple professional roles: a factor analysis study. BMC Health Services Research, 2020, 20, 257.	2.2	9
221	Passive Muscleâ€“Tendon Amplitude May Not Reflect Skeletal Muscle Functional Excursion. Journal of Hand Surgery, 2006, 31, 1105-1110.	1.6	8
222	Structural and mechanical alterations in spastic skeletal muscle. Developmental Medicine and Child Neurology, 2005, 47, 713-717.	2.1	8
223	Nerve strain correlates with structural changes quantified by fourier analysis. Muscle and Nerve, 2013, 48, 433-435.	2.2	8
224	Differential DNA methylation and transcriptional signatures characterize impairment of muscle stem cells in pediatric human muscle contractures after brain injury. FASEB Journal, 2021, 35, e21928.	0.5	8
225	Sample size considerations in human muscle architecture studies. Muscle and Nerve, 2012, 45, 743-745.	2.2	7
226	Effects of voluntary exercise on muscle structure and function in cerebral palsy. Developmental Medicine and Child Neurology, 2022, 64, 700-708.	2.1	7
227	Tendon transfer surgery: clinical implications of experimental studies. Clinical Orthopaedics and Related Research, 2002, , S163-70.	1.5	7
228	Studies of Myosin Isoforms in Muscle Cells: Single Cell Mechanics and Gene Transfer. Clinical Orthopaedics and Related Research, 2002, 403, S51-S58.	1.5	6
229	Polarization gating enables sarcomere length measurements by laser diffraction in fibrotic muscle. Journal of Biomedical Optics, 2014, 19, 117009.	2.6	6
230	Rehabilitation Research at the National Institutes of Health: Moving the Field Forward (Executive) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.9	6
231	Rehabilitation Research at the National Institutes of Health: Moving the Field Forward (Executive) Tj ETQq1 1 0.784314 rgBT /Overloc	0.3	5
232	Systemic Transplantation of Adult Multipotent Stem Cells Functionally Rejuvenates Aged Articular Cartilage. , 2021, 12, 726.		5
233	Muscleâ€tendon unit in children with cerebral palsy. Developmental Medicine and Child Neurology, 2021, 63, 908-913.	2.1	5
234	Characterization of Motor-Evoked Responses Obtained with Transcutaneous Electrical Spinal Stimulation from the Lower-Limb Muscles after Stroke. Brain Sciences, 2021, 11, 289.	2.3	5

#	Article	IF	Citations
235	Direct memory access of diffraction patterns from striated muscle â€" A software view. Computer Programs in Biomedicine, 1981, 13, 27-31.	0.7	4
236	Measurement of frog semitendinosus force, tendon load-deformation and load-strain properties. Journal of Biomechanics, 1989, 22, 1048.	2.1	4
237	Resonant Reflection Spectroscopy of Biomolecular Arrays in Muscle. Biophysical Journal, 2014, 107, 2352-2360.	0.5	4
238	Muscle Biology of Contractures in Children with Cerebral Palsy. , 2018, , 143-153.		4
239	In vivo supraspinatus muscle contractility and architecture in rabbit. Journal of Applied Physiology, 2020, 129, 1405-1412.	2.5	4
240	Measuring and modeling in vivo human gracilis muscle-tendon unit length. Journal of Biomechanics, 2021, 125, 110592.	2.1	4
241	Procedures for obtaining muscle physiology parameters during a gracilis free-functioning muscle transfer in adult patients with brachial plexus injury. Scientific Reports, 2022, 12, 6095.	3.3	4
242	Myoneural Necrosis following High-Frequency Electrical Stimulation of the Cast-Immobilized Rabbit Hindlimb. Stereotactic and Functional Neurosurgery, 1989, 53, 261-273.	1.5	3
243	The Effect of Intrinsic Loading and Reconstruction Upon Grip Capacity and Finger Extension Kinematics. Journal of Hand Surgery, 2015, 40, 96-101.e1.	1.6	3
244	Rehabilitation research at the National Institutes of Health: Moving the field forward (Executive) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38	2.0	3
245	Co-Expression Network Approach to Studying the Effects of Botulinum Neurotoxin-A. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2018, 15, 2009-2016.	3.0	3
246	Systemic transplantation of adult multipotent stem cells prevents articular cartilage degeneration in a mouse model of accelerated ageing. Immunity and Ageing, 2021, 18, 27.	4.2	3
247	Stretch-induced satellite cell deformation in contractured muscles in children with cerebral palsy. Journal of Biomechanics, 2021, 126, 110635.	2.1	3
248	Muscle Changes at the Cellular-Fiber Level in Cerebral Palsy. , 2018, , 1-12.		2
249	Sensor Anchoring Improves the Correlation Between Intramuscular Pressure and Muscle Tension in a Rabbit Model. Annals of Biomedical Engineering, 2021, 49, 912-921.	2.5	2
250	Surgical Mobilization of Skeletal Muscles Changes Functional Propertiesâ€"Implications for Tendon Transfers. Journal of Hand Surgery, 2021, 46, 341.e1-341.e10.	1.6	2
251	The Lumbricals Are Not the Workhorse of Digital Extension and Do Not Relax Their Own Antagonist. Journal of Hand Surgery, 2021, 46, 232-235.	1.6	2
252	Commentary: Muscle Microbiopsy to Delineate Stem Cell Involvement in Young Patients: A Novel Approach for Children With Cerebral Palsy. Frontiers in Physiology, 2021, 12, 642366.	2.8	2

#	Article	IF	Citations
253	A Mobility Measure for Inpatient Rehabilitation Using Multigroup, Multidimensional Methods. Journal of Neurologic Physical Therapy, 2021, 45, 101-111.	1.4	2
254	Rehabilitation research at the National Institutes of Health moving the field forward (executive) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	1.3	2
255	Implications of muscle design on surgical reconstruction of upper extremities. Clinical Orthopaedics and Related Research, 2004, , 267-79.	1.5	2
256	An estrogen-sensitive fibroblast population drives abdominal muscle fibrosis in an inguinal hernia mouse model. JCI Insight, 2022, 7, .	5.0	2
257	Mechanisms of muscle injury due to intense exercise. Current Opinion in Orthopaedics, 1993, 4, 80-84.	0.3	1
258	Spastic wrist flexors are more severely affected than wrist extensors in children with cerebral palsy. Developmental Medicine and Child Neurology, 2005, 47, 384-389.	2.1	1
259	Intermediate Filament and Ecm Mechanics Deduced from Desmin Knockout Muscles. Biophysical Journal, 2010, 98, 545a.	0.5	1
260	The Use of Neural Networks and Texture Analysis for Rapid Objective Selection of Regions of Interest in Cytoskeletal Images. Microscopy and Microanalysis, 2012, 18, 115-122.	0.4	1
261	Skeletal muscle changes due to cerebral palsy. , 2014, , 135-155.		1
262	Development of a Multidimensional, Multigroup Measure of Self-Care for Inpatient Rehabilitation. Archives of Physical Medicine and Rehabilitation, 2021, 102, 97-105.	0.9	1
263	Outcome from a brachialis donor for wrist extension in tetraplegiaâ€”time to reconsider the International Classification for Surgery of the Hand in Tetraplegia (ICSHT). Spinal Cord Series and Cases, 2021, 7, 73.	0.6	1
264	Biological and Mechanical Pathologies in Spastic Skeletal Muscle: The Functional Implications of Therapeutic Neurotoxins. , 2009, , 159-171.		0
265	Human skeletal muscle biochemical diversity. Journal of Experimental Biology, 2012, 215, 2931-2931.	1.7	0
266	Response to Letter to the Editor: â€˜Poisson's ratios in anisotropic materials at finite strains; comment on short communication by Smith et al. (2011)â€™. Journal of Biomechanics, 2012, 45, 1859-1860.	2.1	0
267	New Opportunities and Novel Paradigms to Support Neuromuscular Research. Physical Medicine and Rehabilitation Clinics of North America, 2012, 23, 95-105.	1.3	0
268	Desmin Intermediate Filaments Form a Stress-Transmitting and Stress-Signaling Network In Muscle. Medicine and Science in Sports and Exercise, 2015, 47, 98.	0.4	0
269	Identification of Collagen Producing Cells in a Model of Skeletal Muscle Fibrosis. Medicine and Science in Sports and Exercise, 2015, 47, 101.	0.4	0
270	Skeletal Muscle Succinate Dehydrogenase Activity is not Altered in Cerebral Palsy. Medicine and Science in Sports and Exercise, 2015, 47, 62.	0.4	0

#	Article	IF	Citations
271	Minimally Invasive Sarcomere Length Measured by Novel Resonant Reflection Spectroscopy. Medicine and Science in Sports and Exercise, 2015, 47, 290.	0.4	0
272	Long-Term Loss of Function in Rat Skeletal Muscle After a Single Botox Injection. Archives of Physical Medicine and Rehabilitation, 2016, 97, e25-e26.	0.9	0
273	Resonant Reflection Spectroscopy and Optical Interferometry to Measure Sarcomere Structure in Muscle. Biophysical Journal, 2018, 114, 135a.	0.5	0
274	Improvement in Gait Function After Receiving Noninvasive Spinal Stimulation Combined With Gait Training in Chronic Stroke Survivors. Archives of Physical Medicine and Rehabilitation, 2020, 101, e46.	0.9	0
275	Tropomodulin isoforms regulate thin filament pointed-end capping and skeletal muscle physiology. Journal of General Physiology, 2010, 135, i4-i4.	1.9	0
276	Anatomy and Mechanics of the Abdominal Muscles. , 2011, , 70-79.		0
277	Architectural Design and Function of Human Back Muscles. , 2011, , 54-69.		0
278	Tendon Transfer Increases Passive Tension of the Entire Muscle, Fiber Bundle and Single Fiber. The Japanese Journal of Rehabilitation Medicine, 2011, 48, 129-133.	0.0	0
279	Effect of desmin knockout on skeletal muscle extracellular matrix organization. FASEB Journal, 2012, 26, 1060.12.	0.5	0
280	Biochemical diversity of human skeletal muscle. FASEB Journal, 2012, 26, 1141.2.	0.5	0
281	Gene Expression Changes After a Single Botox Injection in the Rat Tibialis Anterior Muscle. FASEB Journal, 2012, 26, 1086.12.	0.5	0
282	The nebulin SH3 domain is dispensable for normal skeletal muscle structure but is required for effective active load bearing in mouse. Development (Cambridge), 2014, 141, e108-e108.	2.5	0
283	Shoulder Muscle Architecture, Physiology, and Plasticity. , 2017, , 215-225.		0
284	Muscle Changes at the Cellular-Fiber Level in Cerebral Palsy. , 2020, , 241-252.		0
285	Teamwork Pays! Ten Tips for a Great Surgeon-Scientist Collaboration. Journal of Hand Surgery, 2022, 47, 673-676.	1.6	0