

Richard T Jaspers

List of Publications by Year in descending order

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117
papers

3,450
citations

147801

31
h-index

182427

51
g-index

131
all docs

131
docs citations

131
times ranked

4666
citing authors

#	ARTICLE	IF	CITATIONS
1	Reinforcement versus Fluidization in Cytoskeletal Mechanoresponsiveness. <i>PLoS ONE</i> , 2009, 4, e5486.	2.5	232
2	The muscle fiber typeâ€“fiber size paradox: hypertrophy or oxidative metabolism?. <i>European Journal of Applied Physiology</i> , 2010, 110, 665-694.	2.5	213
3	Single-cell analysis uncovers that metabolic reprogramming by ErbB2 signaling is essential for cardiomyocyte proliferation in the regenerating heart. <i>ELife</i> , 2019, 8, .	6.0	162
4	Anatomical information is needed in ultrasound imaging of muscle to avoid potentially substantial errors in measurement of muscle geometry. <i>Muscle and Nerve</i> , 2009, 39, 652-665.	2.2	129
5	Adaptation of muscle size and myofascial force transmission: a review and some new experimental results. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2005, 15, 349-380.	2.9	126
6	Transcriptome analysis of the response to chronic constant hypoxia in zebrafish hearts. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2008, 178, 77-92.	1.5	103
7	Aging related changes in determinants of muscle force generating capacity: A comparison of muscle aging in men and male rodents. <i>Ageing Research Reviews</i> , 2014, 14, 43-55.	10.9	93
8	Intramuscular Connective Tissue Differences in Spastic and Control Muscle: A Mechanical and Histological Study. <i>PLoS ONE</i> , 2014, 9, e101038.	2.5	92
9	Humans adjust control to initial squat depth in vertical squat jumping. <i>Journal of Applied Physiology</i> , 2008, 105, 1428-1440.	2.5	68
10	Effects of growth on geometry of gastrocnemius muscle in children: a three-dimensional ultrasound analysis. <i>Journal of Anatomy</i> , 2011, 219, 388-402.	1.5	66
11	Expression of muscle anabolic and metabolic factors in mechanically loaded MLO-Y4 osteocytes. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2012, 302, E389-E395.	3.5	64
12	Acute effects of intramuscular aponeurotomy on rat gastrocnemius medialis: Force transmission, muscle force and sarcomere length. <i>Journal of Biomechanics</i> , 1999, 32, 71-79.	2.1	62
13	The Role of IGF-1 Signaling in Skeletal Muscle Atrophy. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1088, 109-137.	1.6	60
14	Maximal oxygen uptake is proportional to muscle fiber oxidative capacity, from chronic heart failure patients to professional cyclists. <i>Journal of Applied Physiology</i> , 2016, 121, 636-645.	2.5	59
15	Right ventricular oxygen supply parameters are decreased in human and experimental pulmonary hypertension. <i>Journal of Heart and Lung Transplantation</i> , 2013, 32, 231-240.	0.6	53
16	Mechanical Loading by Fluid Shear Stress of Myotube Glycocalyx Stimulates Growth Factor Expression and Nitric Oxide Production. <i>Cell Biochemistry and Biophysics</i> , 2014, 69, 411-419.	1.8	49
17	Oxygenation Threshold Derived from Near-Infrared Spectroscopy: Reliability and Its Relationship with the First Ventilatory Threshold. <i>PLoS ONE</i> , 2016, 11, e0162914.	2.5	48
18	Effects of 1,25(OH) ₂ D ₃ and 25(OH)D ₃ on C2C12 Myoblast Proliferation, Differentiation, and Myotube Hypertrophy. <i>Journal of Cellular Physiology</i> , 2016, 231, 2517-2528.	4.1	45

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19	Critical determinants of combined sprint and endurance performance: an integrative analysis from muscle fiber to the human body. <i>FASEB Journal</i> , 2018, 32, 2110-2123.	0.5	45
20	Krogh's diffusion coefficient for oxygen in isolated <i>Xenopus</i> skeletal muscle fibers and rat myocardial trabeculae at maximum rates of oxygen consumption. <i>Journal of Applied Physiology</i> , 2005, 99, 2173-2180.	2.5	44
21	A chronotype comparison of South African and Dutch marathon runners: The role of scheduled race start times and effects on performance. <i>Chronobiology International</i> , 2015, 32, 858-868.	2.0	44
22	TGF- β 2 Regulates Collagen Type I Expression in Myoblasts and Myotubes via Transient Ctgf and Fgf-2 Expression. <i>Cells</i> , 2020, 9, 375.	4.1	44
23	Reproducibility of hand-held ankle dynamometry to measure altered ankle moment-angle characteristics in children with spastic cerebral palsy. <i>Clinical Biomechanics</i> , 2010, 25, 802-808.	1.2	41
24	Myofascial force transmission between a single muscle head and adjacent tissues: length effects of head III of rat EDL. <i>Journal of Applied Physiology</i> , 2003, 95, 2004-2013.	2.5	39
25	Time-course of changes in the myonuclear domain during denervation in young adult and old rat gastrocnemius muscle. <i>Muscle and Nerve</i> , 2011, 43, 212-222.	2.2	39
26	Acute and Long-Term Effects on Muscle Force After Intramuscular Aponeurotic Lengthening. <i>Clinical Orthopaedics and Related Research</i> , 2000, 378, 264-273.	1.5	38
27	Single muscle fibre contractile properties differ between bodybuilders, power athletes and control subjects. <i>Experimental Physiology</i> , 2015, 100, 1331-1341.	2.0	37
28	IL-6 and IGF-1 Signaling Within and Between Muscle and Bone: How Important is the mTOR Pathway for Bone Metabolism?. <i>Current Osteoporosis Reports</i> , 2015, 13, 131-139.	3.6	36
29	Exercise, fasting, and mimetics: toward beneficial combinations?. <i>FASEB Journal</i> , 2017, 31, 14-28.	0.5	36
30	Medial gastrocnemius muscle growth during adolescence is mediated by increased fascicle diameter rather than by longitudinal fascicle growth. <i>Journal of Anatomy</i> , 2015, 226, 530-541.	1.5	35
31	Blunted angiogenesis and hypertrophy are associated with increased fatigue resistance and unchanged aerobic capacity in old overloaded mouse muscle. <i>Age</i> , 2016, 38, 39.	3.0	35
32	Freehand three-dimensional ultrasound to assess semitendinosus muscle morphology. <i>Journal of Anatomy</i> , 2016, 229, 591-599.	1.5	34
33	Mechanical Stimulation and IGF-1 Enhance mRNA Translation Rate in Osteoblasts Via Activation of the AKT-mTOR Pathway. <i>Journal of Cellular Physiology</i> , 2016, 231, 1283-1290.	4.1	33
34	Blunted hypertrophic response in old mouse muscle is associated with a lower satellite cell density and is not alleviated by resveratrol. <i>Experimental Gerontology</i> , 2015, 62, 23-31.	2.8	32
35	SB431542 treatment promotes the hypertrophy of skeletal muscle fibers but decreases specific force. <i>Muscle and Nerve</i> , 2010, 41, 624-629.	2.2	31
36	Muscle morphology of the vastus lateralis is strongly related to ergometer performance, sprint capacity and endurance capacity in Olympic rowers. <i>Journal of Sports Sciences</i> , 2018, 36, 2111-2120.	2.0	30

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37	Physiological angiogenesis is a graded, not threshold, response. <i>Journal of Physiology</i> , 2011, 589, 195-206.	2.9	29
38	The time course of myonuclear accretion during hypertrophy in young adult and older rat plantaris muscle. <i>Annals of Anatomy</i> , 2011, 193, 56-63.	1.9	29
39	Movement within foot and ankle joint in children with spastic cerebral palsy: a 3-dimensional ultrasound analysis of medial gastrocnemius length with correction for effects of foot deformation. <i>BMC Musculoskeletal Disorders</i> , 2013, 14, 365.	1.9	29
40	Increased Endoplasmic Reticulum Stress in Mouse Osteocytes with Aging Alters Cox-2 Response to Mechanical Stimuli. <i>Calcified Tissue International</i> , 2015, 96, 123-128.	3.1	29
41	Mechanosensitivity of aged muscle stem cells. <i>Journal of Orthopaedic Research</i> , 2018, 36, 632-641.	2.3	29
42	Early effects of muscle atrophy on shoulder joint development in infants with unilateral birth brachial plexus injury. <i>Developmental Medicine and Child Neurology</i> , 2011, 53, 173-178.	2.1	28
43	Under the Hood: Skeletal Muscle Determinants of Endurance Performance. <i>Frontiers in Sports and Active Living</i> , 2021, 3, 719434.	1.8	28
44	An MRI study on the relations between muscle atrophy, shoulder function and glenohumeral deformity in shoulders of children with obstetric brachial plexus injury. <i>Journal of Brachial Plexus and Peripheral Nerve Injury</i> , 2014, 04, e21-e28.	1.0	27
45	Past, Present, and Future Perspective of Targeting Myostatin and Related Signaling Pathways to Counteract Muscle Atrophy. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1088, 153-206.	1.6	27
46	Stimuli for Adaptations in Muscle Length and the Length Range of Active Force Exertion – A Narrative Review. <i>Frontiers in Physiology</i> , 2021, 12, 742034.	2.8	27
47	Notoginsenoside R1 attenuates oxidative stress-induced osteoblast dysfunction through JNK signalling pathway. <i>Journal of Cellular and Molecular Medicine</i> , 2021, 25, 11278-11289.	3.6	27
48	Reduced dietary intake of micronutrients with antioxidant properties negatively impacts muscle health in aged mice. <i>Journal of Cachexia, Sarcopenia and Muscle</i> , 2018, 9, 146-159.	7.3	26
49	Adaptations in muscle oxidative capacity, fiber size, and oxygen supply capacity after repeated-sprint training in hypoxia combined with chronic hypoxic exposure. <i>Journal of Applied Physiology</i> , 2018, 124, 1403-1412.	2.5	25
50	Differential effects of muscle fibre length and insulin on muscle-specific mRNA content in isolated mature muscle fibres during long-term culture. <i>Cell and Tissue Research</i> , 2006, 326, 795-808.	2.9	24
51	Increased oxidative metabolism and myoglobin expression in zebrafish muscle during chronic hypoxia. <i>Biology Open</i> , 2014, 3, 718-727.	1.2	24
52	A randomized controlled trial studying efficacy and tolerance of a knee-ankle-foot orthosis used to prevent equinus in children with spastic cerebral palsy. <i>Clinical Rehabilitation</i> , 2014, 28, 1025-1038.	2.2	22
53	Aging related ER stress is not responsible for anabolic resistance in mouse skeletal muscle. <i>Biochemical and Biophysical Research Communications</i> , 2015, 468, 702-707.	2.1	22
54	Plantaris muscle weakness in old mice: relative contributions of changes in specific force, muscle mass, myofiber cross-sectional area, and number. <i>Age</i> , 2014, 36, 9726.	3.0	21

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55	CaMKII content affects contractile, but not mitochondrial, characteristics in regenerating skeletal muscle. <i>BMC Physiology</i> , 2014, 14, 7.	3.6	21
56	Mechanically Loaded Myotubes Affect Osteoclast Formation. <i>Calcified Tissue International</i> , 2014, 94, 319-326.	3.1	21
57	PKM2 Determines Myofiber Hypertrophy In Vitro and Increases in Response to Resistance Exercise in Human Skeletal Muscle. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7062.	4.1	21
58	Skeletal muscle capillarization and oxidative metabolism in healthy smokers. <i>Applied Physiology, Nutrition and Metabolism</i> , 2008, 33, 1240-1245.	1.9	20
59	Knee Moment-Angle Characteristics and Semitendinosus Muscle Morphology in Children with Spastic Paresis Selected for Medial Hamstring Lengthening. <i>PLoS ONE</i> , 2016, 11, e0166401.	2.5	20
60	3D Ultrasound Imaging: Fast and Cost-effective Morphometry of Musculoskeletal Tissue. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	19
61	Outcome of medial hamstring lengthening in children with spastic paresis: A biomechanical and morphological observational study. <i>PLoS ONE</i> , 2018, 13, e0192573.	2.5	19
62	Anthropometric Clusters of Competitive Cyclists and Their Sprint and Endurance Performance. <i>Frontiers in Physiology</i> , 2019, 10, 1276.	2.8	19
63	A critical role for myoglobin in zebrafish development. <i>International Journal of Developmental Biology</i> , 2009, 53, 517-524.	0.6	18
64	Physicochemical Niche Conditions and Mechanosensing by Osteocytes and Myocytes. <i>Current Osteoporosis Reports</i> , 2019, 17, 235-249.	3.6	17
65	Does a Hypertrophying Muscle Fibre Reprogramme its Metabolism Similar to a Cancer Cell?. <i>Sports Medicine</i> , 2022, 52, 2569-2578.	6.5	17
66	Splint: the efficacy of orthotic management in rest to prevent equinus in children with cerebral palsy, a randomised controlled trial. <i>BMC Pediatrics</i> , 2012, 12, 38.	1.7	16
67	Shear Stress Modulates Osteoblast Cell and Nucleus Morphology and Volume. <i>International Journal of Molecular Sciences</i> , 2020, 21, 8361.	4.1	15
68	Fibrodysplasia Ossificans Progressiva: What Have We Achieved and Where Are We Now? Follow-up to the 2015 Lorentz Workshop. <i>Frontiers in Endocrinology</i> , 2021, 12, 732728.	3.5	15
69	Healing of the aponeurosis during recovery from aponeurotomy: Morphological and histological adaptation and related changes in mechanical properties. <i>Journal of Orthopaedic Research</i> , 2005, 23, 266-273.	2.3	14
70	Musculoskeletal growth in the upper arm in infants after obstetric brachial plexus lesions and its relation with residual muscle function. <i>Developmental Medicine and Child Neurology</i> , 2012, 54, 1050-1056.	2.1	14
71	IGF-1 Attenuates Hypoxia-Induced Atrophy but Inhibits Myoglobin Expression in C2C12 Skeletal Muscle Myotubes. <i>International Journal of Molecular Sciences</i> , 2017, 18, 1889.	4.1	14
72	Effects of strain on contractile force and number of sarcomeres in series of <i>Xenopus laevis</i> single muscle fibres during long-term culture. <i>Journal of Muscle Research and Cell Motility</i> , 2004, 25, 285-296.	2.0	13

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73	Myofiber stretch induces tensile and shear deformation of muscle stem cells in their native niche. <i>Biophysical Journal</i> , 2021, 120, 2665-2678.	0.5	13
74	Attenuated Increase in Maximal Force of Rat Medial Gastrocnemius Muscle after Concurrent Peak Power and Endurance Training. <i>BioMed Research International</i> , 2013, 2013, 1-9.	1.9	12
75	Muscle contractile properties as an explanation of the higher mean power output in marmosets than humans during jumping. <i>Journal of Experimental Biology</i> , 2015, 218, 2166-73.	1.7	12
76	Salivary Histatin 1 and 2 Are Targeted to Mitochondria and Endoplasmic Reticulum in Human Cells. <i>Cells</i> , 2020, 9, 795.	4.1	11
77	Synergistic short-term and long-term effects of TGF- β 1 and 3 on collagen production in differentiating myoblasts. <i>Biochemical and Biophysical Research Communications</i> , 2021, 547, 176-182.	2.1	11
78	Effects of alfacalcidol on circulating cytokines and growth factors in rat skeletal muscle. <i>Journal of Physiological Sciences</i> , 2011, 61, 525-35.	2.1	10
79	Comparison of the validity of Hill and Huxley muscle tendon complex models using experimental data obtained from rat m. soleus in situ. <i>Journal of Experimental Biology</i> , 2016, 219, 977-87.	1.7	9
80	Measuring wearing time of knee-ankle-foot orthoses in children with cerebral palsy: comparison of parent-report and objective measurement. <i>Disability and Rehabilitation</i> , 2018, 40, 398-403.	1.8	9
81	Foot flexibility confounds the assessment of triceps surae extensibility in children with spastic paresis during typical physical examinations. <i>Journal of Biomechanics</i> , 2020, 99, 109532.	2.1	9
82	Lack of Tgfbr1 and Acvr1b synergistically stimulates myofibre hypertrophy and accelerates muscle regeneration. <i>ELife</i> , 2022, 11, .	6.0	9
83	Effects of Acute and Chronic Resistance Exercise on the Skeletal Muscle Metabolome. <i>Metabolites</i> , 2022, 12, 445.	2.9	9
84	Muscle-Type Specific Autophosphorylation of CaMKII Isoforms after Paced Contractions. <i>BioMed Research International</i> , 2014, 2014, 1-20.	1.9	8
85	Biochemical Interaction Between Muscle and Bone: A Physiological Reality?. <i>Clinical Reviews in Bone and Mineral Metabolism</i> , 2014, 12, 27-43.	0.8	8
86	Assessment of net knee moment-angle characteristics by instrumented hand-held dynamometry in children with spastic cerebral palsy and typically developing children. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2015, 12, 67.	4.6	8
87	Decrease in ankle-foot dorsiflexion range of motion is related to increased knee flexion during gait in children with spastic cerebral palsy. <i>Journal of Electromyography and Kinesiology</i> , 2015, 25, 339-346.	1.7	8
88	Metabolic Cost of Activation and Mechanical Efficiency of Mouse Soleus Muscle Fiber Bundles During Repetitive Concentric and Eccentric Contractions. <i>Frontiers in Physiology</i> , 2019, 10, 760.	2.8	8
89	Reduced growth rate of aged muscle stem cells is associated with impaired mechanosensitivity. <i>Aging</i> , 2022, 14, 28-53.	3.1	8
90	Effects of Concurrent Training on Oxidative Capacity in Rat Gastrocnemius Muscle. <i>Medicine and Science in Sports and Exercise</i> , 2013, 45, 1674-1683.	0.4	7

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91	Regulation of myoglobin in hypertrophied rat cardiomyocytes in experimental pulmonary hypertension. <i>Pflügers Archiv European Journal of Physiology</i> , 2016, 468, 1697-1707.	2.8	7
92	Gastrocnemius Medialis Muscle Geometry and Extensibility in Typically Developing Children and Children With Spastic Paresis Aged 6–13 Years. <i>Frontiers in Physiology</i> , 2020, 11, 528522.	2.8	7
93	Mechanical output in jumps of marmosets (<i>Callithrix jacchus</i>). <i>Journal of Experimental Biology</i> , 2014, 217, 482-8.	1.7	6
94	Effects of different training modalities on phosphate homeostasis and local vitamin D metabolism in rat bone. <i>PeerJ</i> , 2019, 7, e6184.	2.0	6
95	Training-Induced Muscle Adaptations During Competitive Preparation in Elite Female Rowers. <i>Frontiers in Sports and Active Living</i> , 2021, 3, 781942.	1.8	6
96	Effect of vasti morphology on peak sprint cycling power of a human musculoskeletal simulation model. <i>Journal of Applied Physiology</i> , 2020, 128, 445-455.	2.5	5
97	RGD-functionalized supported lipid bilayers modulate pre-osteoblast adherence and promote osteogenic differentiation. <i>Journal of Biomedical Materials Research - Part A</i> , 2020, 108, 923-937.	4.0	5
98	Pulsating fluid flow affects pre-osteoblast behavior and osteogenic differentiation through production of soluble factors. <i>Physiological Reports</i> , 2021, 9, e14917.	1.7	5
99	Commentary: Validation of a Ramp Running Protocol for Determination of the True VO ₂ max in Mice. <i>Frontiers in Physiology</i> , 2017, 8, 330.	2.8	3
100	Commentaries on Viewpoint: $\dot{V}_{I\dot{E}}^{peak}$ is an acceptable estimate of cardiorespiratory fitness but not $\dot{V}_{I\dot{E}}^{max}$. <i>Journal of Applied Physiology</i> , 2018, 125, 966-967.	2.5	3
101	Notoginsenoside R1 Promotes Migration, Adhesion, Spreading, and Osteogenic Differentiation of Human Adipose Tissue-Derived Mesenchymal Stromal Cells. <i>Molecules</i> , 2022, 27, 3403.	3.8	3
102	Comprehensive evaluation of gait, spasticity, and muscle morphology: A case report of a child with spastic paresis treated with Botulinum NeuroToxin-A, serial casting, and physiotherapy. <i>Clinical Case Reports (discontinued)</i> , 2019, 7, 1637-1646.	0.5	2
103	Systematic Review of Lumbar Elastic Tape on Trunk Mobility: A Debatable Issue. <i>Archives of Rehabilitation Research and Clinical Translation</i> , 2021, 3, 100131.	0.9	2
104	Remodeling of Rat M. Gastrocnemius Medialis During Recovery From Aponeurotomy. <i>Frontiers in Physiology</i> , 2020, 11, 541302.	2.8	2
105	Glycine receptor subunit- β -deficiency in a mouse model of spasticity results in attenuated physical performance, growth, and muscle strength. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2022, 322, R368-R388.	1.8	2
106	Fluid shear stress-induced mechanotransduction in myoblasts: Does it depend on the glycocalyx?. <i>Experimental Cell Research</i> , 2022, 417, 113204.	2.6	2
107	MUSCLE ACTIVATION PATTERNS IN SQUAT JUMPS FROM DIFFERENT INITIAL POSITIONS. <i>Journal of Biomechanics</i> , 2007, 40, S300.	2.1	1
108	Muscle Volume Is A Critical Determinant Of Rowing Performance In Olympic Rowers. <i>Medicine and Science in Sports and Exercise</i> , 2017, 49, 768-769.	0.4	1

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109	Stiff matrices enhance myoblast proliferation, reduce differentiation, and alter the response to fluid shear stress in vitro. <i>Cell Biochemistry and Biophysics</i> , 2022, 80, 161.	1.8	1
110	Muscle physiology: move to translation. <i>Journal of Muscle Research and Cell Motility</i> , 2014, 35, 1-2.	2.0	0
111	Reply to Gifford et al.: Symmorphosis in chronic heart failure patients?. <i>Journal of Applied Physiology</i> , 2016, 121, 1040-1040.	2.5	0
112	O63: Medial gastrocnemius muscle in children with Spastic Paresis show growth defects for muscle volume and altered normalized muscle and tendon length compared to typically developed children. <i>Gait and Posture</i> , 2017, 57, 110-111.	1.4	0
113	Effects of Botulinum Toxin-A and casting treatment on assessed spasticity, muscle morphology and gait kinematics in spastic paresis. <i>Gait and Posture</i> , 2017, 57, 104-105.	1.4	0
114	Changes in inflammation and musculoskeletal tissue-derived biomarker serum levels in response to high- and low-intensity resistance training in individuals with knee osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2020, 28, S336-S337.	1.3	0
115	IGF1 stimulates protein synthesis by enhancing mRNA translation rate in osteoblasts. <i>Bone Abstracts</i> , 0, , .	0.0	0
116	Local administration of low doses of exogenous BMP2 and leptin promotes ectopic bone regeneration in leptin-deficient mice. <i>Bio-Medical Materials and Engineering</i> , 2022, , 1-11.	0.6	0
117	The relationship between quantitative magnetic resonance imaging of the ankle plantar flexors, muscle function during walking and maximal strength in people with neuromuscular diseases. <i>Clinical Biomechanics</i> , 2022, 94, 105609.	1.2	0