Keith Baar

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2077779/publications.pdf

Version: 2024-02-01

140 papers	10,369 citations	36303 51 h-index	33894 99 g-index
144 all docs	144 docs citations	144 times ranked	12619 citing authors

#	Article	IF	Citations
1	Resveratrol Ameliorates Aging-Related Metabolic Phenotypes by Inhibiting cAMP Phosphodiesterases. Cell, 2012, 148, 421-433.	28.9	1,162
2	Adaptations of skeletal muscle to exercise: rapid increase in the transcriptional coactivator PGCâ€1. FASEB Journal, 2002, 16, 1879-1886.	0.5	857
3	Myogenic gene expression signature establishes that brown and white adipocytes originate from distinct cell lineages. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 4401-4406.	7.1	637
4	Phosphorylation of p70^{S6k}correlates with increased skeletal muscle mass following resistance exercise. American Journal of Physiology - Cell Physiology, 1999, 276, C120-C127.	4.6	584
5	A Ketogenic Diet Extends Longevity and Healthspan in Adult Mice. Cell Metabolism, 2017, 26, 539-546.e5.	16.2	348
6	Is irisin a human exercise gene?. Nature, 2012, 488, E9-E10.	27.8	320
7	Rapid formation of functional muscle in vitro using fibrin gels. Journal of Applied Physiology, 2005, 98, 706-713.	2.5	283
8	Supplementation of a suboptimal protein dose with leucine or essential amino acids: effects on myofibrillar protein synthesis at rest and following resistance exercise in men. Journal of Physiology, 2012, 590, 2751-2765.	2.9	241
9	Adaptations to Endurance and Strength Training. Cold Spring Harbor Perspectives in Medicine, 2018, 8, a029769.	6.2	178
10	Sirt1 enhances skeletal muscle insulin sensitivity in mice during caloric restriction. Journal of Clinical Investigation, 2011, 121, 4281-4288.	8.2	164
11	Sirtuin 1 (SIRT1) Deacetylase Activity Is Not Required for Mitochondrial Biogenesis or Peroxisome Proliferator-activated Receptor-Î³ Coactivator-1Î± (PGC-1Î±) Deacetylation following Endurance Exercise. Journal of Biological Chemistry, 2011, 286, 30561-30570.	3.4	156
12	Age-related deficits in skeletal muscle recovery following disuse are associated with neuromuscular junction instability and ER stress, not impaired protein synthesis. Aging, 2016, 8, 127-146.	3.1	152
13	Training with Low Muscle Glycogen Enhances Fat Metabolism in Well-Trained Cyclists. Medicine and Science in Sports and Exercise, 2010, 42, 2046-2055.	0.4	150
14	Effect of Estrogen on Musculoskeletal Performance and Injury Risk. Frontiers in Physiology, 2018, 9, 1834.	2.8	149
15	Engineering of Functional Tendon. Tissue Engineering, 2004, 10, 755-761.	4.6	145
16	Training for Endurance and Strength. Medicine and Science in Sports and Exercise, 2006, 38, 1939-1944.	0.4	137
17	The unfolded protein response is activated in skeletal muscle by high-fat feeding: potential role in the downregulation of protein synthesis. American Journal of Physiology - Endocrinology and Metabolism, 2010, 299, E695-E705.	3.5	134
18	Acute resistance exercise activates rapamycinâ€sensitive and â€insensitive mechanisms that control translational activity and capacity in skeletal muscle. Journal of Physiology, 2016, 594, 453-468.	2.9	129

#	Article	IF	Citations
19	Vitamin Câ€“enriched gelatin supplementation before intermittent activity augments collagen synthesis. American Journal of Clinical Nutrition, 2017, 105, 136-143.	4.7	124
20	The influence of carbohydrateâ€“protein coâ€ingestion following endurance exercise on myofibrillar and mitochondrial protein synthesis. Journal of Physiology, 2011, 589, 4011-4025.	2.9	121
21	Selfâ€organization of rat cardiac cells into contractile 3â€D cardiac tissue. FASEB Journal, 2005, 19, 1-21.	0.5	119
22	Involvement of PPARÎ³ co-activator-1, nuclear respiratory factors 1 and 2, and PPARÎ± in the adaptive response to endurance exercise. Proceedings of the Nutrition Society, 2004, 63, 269-273.	1.0	118
23	More than a store: regulatory roles for glycogen in skeletal muscle adaptation to exercise. American Journal of Physiology - Endocrinology and Metabolism, 2012, 302, E1343-E1351.	3.5	116
24	Tension is required for fibripositor formation. Matrix Biology, 2008, 27, 371-375.	3.6	100
25	Skeletal muscle overexpression of nuclear respiratory factor 1 increases glucose transport capacity. FASEB Journal, 2003, 17, 1666-1673.	0.5	98
26	Signals mediating skeletal muscle remodeling by resistance exercise: PI3-kinase independent activation of mTORC1. Journal of Applied Physiology, 2011, 110, 561-568.	2.5	98
27	Branched-Chain Amino Acid Ingestion Stimulates Muscle Myofibrillar Protein Synthesis following Resistance Exercise in Humans. Frontiers in Physiology, 2017, 8, 390.	2.8	97
28	5-Aminoimidazole-4-Carboxamide 1-Î²-d-Ribofuranoside Acutely Stimulates Skeletal Muscle 2-Deoxyglucose Uptake in Healthy Men. Diabetes, 2007, 56, 2078-2084.	0.6	93
29	Maintenance of muscle mass and loadâ€induced growth in Muscle <scp>RING</scp> Finger 1 null mice with age. Aging Cell, 2014, 13, 92-101.	6.7	92
30	DNA-PK Promotes the Mitochondrial, Metabolic, and Physical Decline that Occurs During Aging. Cell Metabolism, 2017, 25, 1135-1146.e7.	16.2	92
31	Cultured slow vs. fast skeletal muscle cells differ in physiology and responsiveness to stimulation. American Journal of Physiology - Cell Physiology, 2006, 291, C11-C17.	4.6	90
32	Normal hypertrophy accompanied by phosphoryation and activation of AMPâ€activated protein kinase Î±1 following overload in LKB1 knockout mice. Journal of Physiology, 2008, 586, 1731-1741.	2.9	88
33	Selected In-Season Nutritional Strategies to Enhance Recovery for Team Sport Athletes: A Practical Overview. Sports Medicine, 2017, 47, 2201-2218.	6.5	87
34	Resistance exercise, muscle loading/unloading and the control of muscle mass. Essays in Biochemistry, 2006, 42, 61-74.	4.7	86
35	Muscle-specific and age-related changes in protein synthesis and protein degradation in response to hindlimb unloading in rats. Journal of Applied Physiology, 2017, 122, 1336-1350.	2.5	85
36	Using Molecular Biology to Maximize Concurrent Training. Sports Medicine, 2014, 44, 117-125.	6.5	82

#	Article	IF	Citations
37	The initiation of embryonic-like collagen fibrillogenesis by adult human tendon fibroblasts when cultured under tension. Biomaterials, 2010, 31, 4889-4897.	11.4	81
38	mVps34 is activated following highâ€resistance contractions. Journal of Physiology, 2009, 587, 253-260.	2.9	80
39	Engineering the Boneâ€“Ligament Interface Using Polyethylene Glycol Diacrylate Incorporated with Hydroxyapatite. Tissue Engineering - Part A, 2009, 15, 1201-1209.	3.1	79
40	The Molecular Basis for Load-Induced Skeletal Muscle Hypertrophy. Calcified Tissue International, 2015, 96, 196-210.	3.1	79
41	Engineering anIn VitroModel of a Functional Ligament from Bone to Bone. Tissue Engineering - Part A, 2010, 16, 3515-3525.	3.1	76
42	mTOR and the health benefits of exercise. Seminars in Cell and Developmental Biology, 2014, 36, 130-139.	5.0	74
43	Absence of the Birtâ€“Hoggâ€“DubÃ© gene product is associated with increased hypoxia-inducible factor transcriptional activity and a loss of metabolic flexibility. Oncogene, 2011, 30, 1159-1173.	5.9	69
44	Factors affecting the structure and maturation of human tissue engineered skeletal muscle. Biomaterials, 2013, 34, 5759-5765.	11.4	69
45	Optimizing an Intermittent Stretch Paradigm Using ERK1/2 Phosphorylation Results in Increased Collagen Synthesis in Engineered Ligaments. Tissue Engineering - Part A, 2012, 18, 277-284.	3.1	68
46	Disruption of the Class IIa HDAC Corepressor Complex Increases Energy Expenditure and Lipid Oxidation. Cell Reports, 2016, 16, 2802-2810.	6.4	68
47	Nutrition for the Prevention and Treatment of Injuries in Track and Field Athletes. International Journal of Sport Nutrition and Exercise Metabolism, 2019, 29, 189-197.	2.1	66
48	Considerations for the development of costâ€effective cell culture media for cultivated meat production. Comprehensive Reviews in Food Science and Food Safety, 2021, 20, 686-709.	11.7	66
49	Neuromuscular Junction Formation in Tissue-Engineered Skeletal Muscle Augments Contractile Function and Improves Cytoskeletal Organization. Tissue Engineering - Part A, 2015, 21, 2595-2604.	3.1	63
50	Effects of aging, exercise, and disease on force transfer in skeletal muscle. American Journal of Physiology - Endocrinology and Metabolism, 2015, 309, E1-E10.	3.5	61
51	A Limited Role for PI(3,4,5)P3 Regulation in Controlling Skeletal Muscle Mass in Response to Resistance Exercise. PLoS ONE, 2010, 5, e11624.	2.5	60
52	Rapamycin does not prevent increases in myofibrillar or mitochondrial protein synthesis following endurance exercise. Journal of Physiology, 2015, 593, 4275-4284.	2.9	54
53	Inhibition of Myostatin Signaling through Notch Activation following Acute Resistance Exercise. PLoS ONE, 2013, 8, e68743.	2.5	53
54	Compensatory regulation of HDAC5 in muscle maintains metabolic adaptive responses and metabolism in response to energetic stress. FASEB Journal, 2014, 28, 3384-3395.	0.5	47

#	Article	IF	Citations
55	Regional variation of tibialis anterior tendon mechanics is lost following denervation. Journal of Applied Physiology, 2006, 101, 1113-1117.	2.5	46
56	The effect of growth factors on both collagen synthesis and tensile strength of engineered human ligaments. Biomaterials, 2012, 33, 6355-6361.	11.4	46
57	Nutritional strategies to support concurrent training. European Journal of Sport Science, 2015, 15, 41-52.	2.7	45
58	Nutrition and the Adaptation to Endurance Training. Sports Medicine, 2014, 44, 5-12.	6.5	44
59	Epigenetic control of skeletal muscle fibre type. Acta Physiologica, 2010, 199, 477-487.	3.8	43
60	ER Stress Induces Anabolic Resistance in Muscle Cells through PKB-Induced Blockade of mTORC1. PLoS ONE, 2011, 6, e20993.	2.5	43
61	The ketogenic diet preserves skeletal muscle with aging in mice. Aging Cell, 2021, 20, e13322.	6.7	42
62	Optimizing training adaptations by manipulating glycogen. European Journal of Sport Science, 2008, 8, 97-106.	2.7	40
63	Molecular brakes regulating mTORC1 activation in skeletal muscle following synergist ablation. American Journal of Physiology - Endocrinology and Metabolism, 2014, 307, E365-E373.	3.5	38
64	Age-related Differences in Dystrophin: Impact on Force Transfer Proteins, Membrane Integrity, and Neuromuscular Junction Stability. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2016, 72, glw109.	3.6	38
65	Endurance training in mice increases the unfolded protein response induced by a high-fat diet. Journal of Physiology and Biochemistry, 2013, 69, 215-225.	3.0	36
66	Characterisation of L-Type Amino Acid Transporter 1 (LAT1) Expression in Human Skeletal Muscle by Immunofluorescent Microscopy. Nutrients, 2018, 10, 23.	4.1	36
67	Glycogen Content Regulates Peroxisome Proliferator Activated Receptor-â^, (PPAR-â^,) Activity in Rat Skeletal Muscle. PLoS ONE, 2013, 8, e77200.	2.5	36
68	The PGC-1Î±-related coactivator promotes mitochondrial and myogenic adaptations in C2C12 myotubes. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 301, R864-R872.	1.8	35
69	Estrogen inhibits lysyl oxidase and decreases mechanical function in engineered ligaments. Journal of Applied Physiology, 2015, 118, 1250-1257.	2.5	35
70	Minimizing Injury and Maximizing Return to Play: Lessons from Engineered Ligaments. Sports Medicine, 2017, 47, 5-11.	6.5	35
71	Autocrine Phosphorylation of p70S6k in Response to Acute Stretch in Myotubes. Molecular Cell Biology Research Communications: MCBRC: Part B of Biochemical and Biophysical Research Communications, 2000, 4, 76-80.	1.6	34
72	The Effect of Serum Origin on Tissue Engineered Skeletal Muscle Function. Journal of Cellular Biochemistry, 2014, 115, 2198-2207.	2.6	33

#	Article	IF	Citations
73	Denervation does not change the ratio of collagen I and collagen III mRNA in the extracellular matrix of muscle. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2007, 292, R983-R987.	1.8	31
74	The training stimulus experienced by the leg muscles during cycling in humans. Experimental Physiology, 2009, 94, 684-694.	2.0	31
75	Factors Affecting the Longevity and Strength in an In Vitro Model of the Boneâ€“Ligament Interface. Annals of Biomedical Engineering, 2010, 38, 2155-2166.	2.5	31
76	mVps34 is activated by an acute bout of resistance exercise. Biochemical Society Transactions, 2007, 35, 1314-1316.	3.4	30
77	The exerciseâ€induced biochemical milieu enhances collagen content and tensile strength of engineered ligaments. Journal of Physiology, 2015, 593, 4665-4675.	2.9	30
78	Contribution of mechanical unloading to trabecular bone loss following nonâ€invasive knee injury in mice. Journal of Orthopaedic Research, 2016, 34, 1680-1687.	2.3	30
79	Contractile and Metabolic Properties of Engineered Skeletal Muscle Derived From Slow and Fast Phenotype Mouse Muscle. Journal of Cellular Physiology, 2015, 230, 1750-1757.	4.1	29
80	Role of contraction duration in inducing fastâ€toâ€slow contractile and metabolic protein and functional changes in engineered muscle. Journal of Cellular Physiology, 2015, 230, 2489-2497.	4.1	27
81	The signaling underlying FITnessThis paper is one of a selection of papers published in this Special Issue, entitled 14th International Biochemistry of Exercise ConferenceÂâ€“ Muscles as Molecular and Metabolic Machines, and has undergone the Journalâ€™s usual peer review process.. Applied Physiology, Nutrition and Metabolism, 2009, 34, 411-419.	1.9	26
82	Stress Relaxation and Targeted Nutrition to Treat Patellar Tendinopathy. International Journal of Sport Nutrition and Exercise Metabolism, 2019, 29, 453-457.	2.1	26
83	Utilizing small nutrient compounds as enhancers of exercise-induced mitochondrial biogenesis. Frontiers in Physiology, 2015, 6, 296.	2.8	25
84	Engineered Muscle. Exercise and Sport Sciences Reviews, 2007, 35, 186-191.	3.0	24
85	Factors That Affect Tissue-Engineered Skeletal Muscle Function and Physiology. Cells Tissues Organs, 2016, 202, 159-168.	2.3	24
86	Normal Ribosomal Biogenesis but Shortened Protein Synthetic Response to Acute Eccentric Resistance Exercise in Old Skeletal Muscle. Frontiers in Physiology, 2018, 9, 1915.	2.8	24
87	Effects of Different Vitamin Câ€“Enriched Collagen Derivatives on Collagen Synthesis. International Journal of Sport Nutrition and Exercise Metabolism, 2019, 29, 526-531.	2.1	22
88	Beneficial Effects of Resistance Exercise on Glycemic Control Are Not Further Improved by Protein Ingestion. PLoS ONE, 2011, 6, e20613.	2.5	21
89	Glucose Concentration and Streptomycin Alter In Vitro Muscle Function and Metabolism. Journal of Cellular Physiology, 2015, 230, 1226-1234.	4.1	21
90	Alterations in the muscle force transfer apparatus in aged rats during unloading and reloading: impact of microRNAâ€31. Journal of Physiology, 2018, 596, 2883-2900.	2.9	21

#	Article	IF	Citations
91	Regulation of contractility and metabolic signaling by the Î²2-adrenergic receptor in rat ventricular muscle. Life Sciences, 2011, 88, 892-897.	4.3	16
92	Variability in the magnitude of response of metabolic enzymes reveals patterns of co-ordinated expression following endurance training in women. Experimental Physiology, 2011, 96, 699-707.	2.0	16
93	HIF1A P582S gene association with endurance training responses in young women. European Journal of Applied Physiology, 2011, 111, 2339-2347.	2.5	16
94	Optimization of muscle cell culture media using nonlinear design of experiments. Biotechnology Journal, 2021, 16, e2100228.	3.5	15
95	Streptomycin Decreases the Functional Shift to a Slow Phenotype Induced by Electrical Stimulation in Engineered Muscle. Tissue Engineering - Part A, 2015, 21, 1003-1012.	3.1	14
96	Generation of desminopathy in rats using CRISPRâ€Cas9. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 1364-1376.	7.3	14
97	New dimensions in tissue engineering: possible models for human physiology. Experimental Physiology, 2005, 90, 799-806.	2.0	13
98	Pharmacology of manipulating lean body mass. Clinical and Experimental Pharmacology and Physiology, 2015, 42, 1-13.	1.9	12
99	Commentaries on Viewpoint: Rejuvenation of the term sarcopenia. Journal of Applied Physiology, 2019, 126, 257-262.	2.5	12
100	A ketogenic diet impacts markers of mitochondrial mass in a tissue specific manner in aged mice. Aging, 2021, 13, 7914-7930.	3.1	12
101	Maintenance of muscle mass in adult male mice is independent of testosterone. PLoS ONE, 2021, 16, e0240278.	2.5	12
102	Adding exogenous biglycan or decorin improves tendon formation for equine peritenon and tendon proper cells in vitro. BMC Musculoskeletal Disorders, 2020, 21, 627.	1.9	11
103	Rehabilitation and nutrition protocols for optimising return to play from traditional ACL reconstruction in elite rugby union players: A case study. Journal of Sports Sciences, 2019, 37, 1794-1803.	2.0	10
104	Myofibrillar protein synthesis rates are increased in chronically exercised skeletal muscle despite decreased anabolic signaling. Scientific Reports, 2022, 12, 7553.	3.3	9
105	A mutation in desmin makes skeletal muscle less vulnerable to acute muscle damage after eccentric loading in rats. FASEB Journal, 2021, 35, e21860.	0.5	8
106	Collagen and Vitamin C Supplementation Increases Lower Limb Rate of Force Development. International Journal of Sport Nutrition and Exercise Metabolism, 2022, 32, 65-73.	2.1	8
107	Localized BMP-4 release improves the enthesis of engineered bone-to-bone ligaments. Translational Sports Medicine, 2018, 1, 60-72.	1.1	7
108	Cannabidiol Does Not Impair Anabolic Signaling Following Eccentric Contractions in Rats. International Journal of Sport Nutrition and Exercise Metabolism, 2021, 31, 93-100.	2.1	7

#	Article	IF	Citations
109	Activation of Akt as a Potential Mediator of Adaptations that Reduce Muscle Injury. Medicine and Science in Sports and Exercise, 2006, 38, 1058-1064.	0.4	6
110	Sex differences in systemic bone and muscle loss following femur fracture in mice. Journal of Orthopaedic Research, 2022, 40, 878-890.	2.3	6
111	Cannabidiol Does Not Impact Acute Anabolic or Inflammatory Signaling in Skeletal Muscle In Vitro. Cannabis and Cannabinoid Research, 2022, 7, 628-636.	2.9	6
112	To perform your best: work hard not long. Journal of Physiology, 2006, 575, 690-690.	2.9	5
113	Transcriptional regulation in response to exercise. Exercise and Sport Sciences Reviews, 1999, 27, 333-79.	3.0	4
114	Scleraxis and collagen I expression increase following pilot isometric loading experiments in a rodent model of patellar tendinopathy. Matrix Biology, 2022, 109, 34-48.	3.6	4
115	Understanding the regulation of muscle plasticity. Journal of Applied Physiology, 2011, 110, 256-257.	2.5	3
116	Fine-tuning metabolismâ€"how products of contraction regulate skeletal muscle adaptation. American Journal of Physiology - Endocrinology and Metabolism, 2012, 302, E1313-E1314.	3.5	3
117	Novel sorafenib-based structural analogues. Anti-Cancer Drugs, 2014, 25, 433-446.	1.4	3
118	Evaluation and Optimization of a Three-Dimensional Construct Model for Equine Superficial Digital Flexor Tendon. Journal of Equine Veterinary Science, 2018, 71, 90-97.	0.9	3
119	Effect of a 12â€week endurance training program on force transfer and membrane integrity proteins in lean, obese, and type 2 diabetic subjects. Physiological Reports, 2020, 8, e14429.	1.7	3
120	Small molecules can have big effects on endurance. Nature Chemical Biology, 2008, 4, 583-584.	8.0	2
121	Muscle-tendon cross talk during muscle wasting. American Journal of Physiology - Cell Physiology, 2021, 321, C559-C568.	4.6	2
122	Treatment of Ligament Constructs with Exercise-conditioned Serum: A Translational Tissue Engineering Model. Journal of Visualized Experiments, 2017, , .	0.3	1
123	Case report of an exercise training and nutritional intervention plan in a patient with A350P mutation in DES gene. Clinical Case Reports (discontinued), 2020, 8, 283-288.	0.5	1
124	24h Stimulation Results In A Rapamycin-dependent Increase In Force Production In 3d Engineered Muscles. Medicine and Science in Sports and Exercise, 2011, 43, 53.	0.4	0
125	Why yet another sports medicine journal?. Translational Sports Medicine, 2018, 1, 3-4.	1.1	0
126	Proposed Mechanisms Underlying the Interference Effect. , 2019, , 89-97.		0

#	Article	IF	Citations
127	Nutrition for Strength Adaptations. , 2019, , 345-357.		0
128	Egr1 And Col1Î±1 Gene Expression Increase With Tensile, But Not Compressive, Loading In Engineered Tendon. Medicine and Science in Sports and Exercise, 2021, 53, 120-120.	0.4	0
129	Phosphorylation of S6K1 at Thr389 following resistance exercise does not require the PIFâ€pocket of PDK1. FASEB Journal, 2006, 20, LB33.	0.5	0
130	Activation of S6K1 during myoblast differentiation inhibits the formation of myotubes independent of IRSâ€1. FASEB Journal, 2006, 20, A820.	0.5	0
131	mVps34 is Activated by an Acute Bout of Resistance Exercise. FASEB Journal, 2008, 22, 959.23.	0.5	0
132	Metabolic effects of electrical stimulation in C2C12 myocytes. FASEB Journal, 2008, 22, .	0.5	0
133	Clenbuterol increases PGC1a promoter activity via a rapamycin sensitive mechanism. FASEB Journal, 2010, 24, 987.9.	0.5	0
134	Pgc1Î± Related Coactivator (prc) Promotes Mitochondrial Biogenesis And Substrate Utilization In C2c12 Myotubes. Medicine and Science in Sports and Exercise, 2010, 42, 16.	0.4	0
135	Lack of Cardiac Response to Running Wheel in MuRF1 KO Mice. Medicine and Science in Sports and Exercise, 2010, 42, 69-70.	0.4	0
136	Glycogen depletion increases peroxisome proliferator activated receptorâ€Î´ (PPARâ€Î´) activity following acute exercise. FASEB Journal, 2011, 25, 1059.8.	0.5	0
137	Delayed Activation of Muscle Protein Synthesis following Resistance Exercise in Mice is mTORC1â€Dependent. FASEB Journal, 2015, 29, 825.13.	0.5	0
138	Testosterone Is Not Required for The Maintenance of Muscle Mass in Fully Matured and Elderly Male Mice. FASEB Journal, 2019, 33, 868.8.	0.5	0
139	Effects Of Vitamin C Enriched Hydrolyzed Collagen On Explosive Performance. Medicine and Science in Sports and Exercise, 2020, 52, 171-171.	0.4	0
140	Effects Of Methyl Sulfonyl Methane On Knee Laxity In Females Throughout The Menstrual Cycle.. Medicine and Science in Sports and Exercise, 2020, 52, 92-92.	0.4	0