Heikki Kainulainen

List of Publications by Year
in descending order

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109 papers	3,404 citations	147801 31 h-index	161849 54 g-index
113 all docs	113 docs citations	113 times ranked	5984 citing authors

#	Article	IF	Citations
1	Dyrk, a Dual Specificity Protein Kinase with Unique Structural Features Whose Activity Is Dependent on Tyrosine Residues between Subdomains VII and VIII. Journal of Biological Chemistry, 1996, 271, 3488-3495.	3.4	231
2	Are skeletal muscle FNDC5 gene expression and irisin release regulated by exercise and related to health?. Journal of Physiology, 2013, 591, 5393-5400.	2.9	219
3	Long-term Leisure-time Physical Activity and Serum Metabolome. Circulation, 2013, 127, 340-348.	1.6	193
4	Physical exercise increases adult hippocampal neurogenesis in male rats provided it is aerobic and sustained. Journal of Physiology, 2016, 594, 1855-1873.	2.9	187
5	Effects of experimental type 1 diabetes and exercise training on angiogenic gene expression and capillarization in skeletal muscle. FASEB Journal, 2006, 20, 1570-1572.	0.5	112
6	Resistance exercise with whey protein ingestion affects mTOR signaling pathway and myostatin in men. Journal of Applied Physiology, 2009, 106, 1720-1729.	2.5	112
7	Amorphous and crystalline polyetheretherketone: Mechanical properties and tissue reactions during a 3â€year followâ€up. Journal of Biomedical Materials Research - Part A, 2008, 84A, 377-383.	4.0	88
8	Leisure-time physical activity and high-risk fat: a longitudinal population-based twin study. International Journal of Obesity, 2009, 33, 1211-1218.	3.4	78
9	Muscle protein synthesis, mTORC1/MAPK/Hippo signaling, and capillary density are altered by blocking of myostatin and activins. American Journal of Physiology - Endocrinology and Metabolism, 2013, 304, E41-E50.	3.5	76
10	Effects of diet-induced obesity and voluntary wheel running on the microstructure of the murine distal femur. Nutrition and Metabolism, 2011, 8, 1.	3.0	71
11	Altered REDD1, myostatin, and Akt/mTOR/FoxO/MAPK signaling in streptozotocin-induced diabetic muscle atrophy. American Journal of Physiology - Endocrinology and Metabolism, 2012, 302, E307-E315.	3.5	70
12	Exercise-induced expression of angiogenic growth factors in skeletal muscle and in capillaries of healthy and diabetic mice. Cardiovascular Diabetology, 2008, 7, 13.	6.8	67
13	Potential Role of Branched-Chain Amino Acid Catabolism in Regulating Fat Oxidation. Exercise and Sport Sciences Reviews, 2013, 41, 194-200.	3.0	67
14	Differences in Muscle and Adipose Tissue Gene Expression and Cardio-Metabolic Risk Factors in the Members of Physical Activity Discordant Twin Pairs. PLoS ONE, 2010, 5, e12609.	2.5	65
15	Physical activity in adulthood: genes and mortality. Scientific Reports, 2015, 5, 18259.	3.3	60
16	"Autophagic flux" in normal mouse tissues: Focus on endogenous LC3A processing. Autophagy, 2011, 7, 1371-1378.	9.1	59
17	Gene expression centroids that link with low intrinsic aerobic exercise capacity and complex disease risk. FASEB Journal, 2010, 24, 4565-4574.	0.5	56
18	PGC-1 isoforms and their target genes are expressed differently in human skeletal muscle following resistance and endurance exercise. Physiological Reports, 2015, 3, e12563.	1.7	54

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19	Degradative and mechanical properties of a novel resorbable plating system during a 3-year follow-up inÂvivo and inÂvitro. Journal of Materials Science: Materials in Medicine, 2008, 19, 1155-1163.	3.6	50
20	Strength Training Improves Metabolic Health Markers in Older Individual Regardless of Training Frequency. Frontiers in Physiology, 2019, 10, 32.	2.8	46
21	A single bout of exercise with high mechanical loading induces the expression of Cyr61/CCN1 and CTGF/CCN2 in human skeletal muscle. Journal of Applied Physiology, 2007, 103, 1395-1401.	2.5	45
22	Placental Glucose Transporters in Fetal Intrauterine Growth Retardation and Macrosomia. Gynecologic and Obstetric Investigation, 1997, 44, 89-92.	1.6	44
23	Labelâ€free profiling of skeletal muscle using highâ€definition mass spectrometry. Proteomics, 2014, 14, 2339-2344.	2.2	44
24	Identification of Novel Transcription Factor-like Gene from Human Intestinal Cells. Biochemical and Biophysical Research Communications, 2000, 276, 660-666.	2.1	40
25	Gluten affects epithelial differentiation-associated genes in small intestinal mucosa of coeliac patients. Clinical and Experimental Immunology, 2007, 150, 294-305.	2.6	40
26	Effects of high-fat diet and physical activity on pyruvate dehydrogenase kinase-4 in mouse skeletal muscle. Nutrition and Metabolism, 2012, 9, 53.	3.0	39
27	Acute Metabolic Response, Energy Expenditure, and EMG Activity in Sitting and Standing. Medicine and Science in Sports and Exercise, 2017, 49, 1927-1934.	0.4	39
28	Effects of fatiguing jumping exercise on mRNA expression of titin-complex proteins and calpains. Journal of Applied Physiology, 2009, 106, 1419-1424.	2.5	38
29	Exercise restores decreased physical activity levels and increases markers of autophagy and oxidative capacity in myostatin/activin-blocked mdx mice. American Journal of Physiology - Endocrinology and Metabolism, 2013, 305, E171-E182.	3.5	38
30	Effects of 32-Year Leisure Time Physical Activity Discordance in Twin Pairs on Health (TWINACTIVE) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 108-117.	0.6	36
31	Physical Activity, Fitness, Glucose Homeostasis, and Brain Morphology in Twins. Medicine and Science in Sports and Exercise, 2015, 47, 509-518.	0.4	35
32	Effects of intrinsic aerobic capacity, aging and voluntary running on skeletal muscle sirtuins and heat shock proteins. Experimental Gerontology, 2016, 79, 46-54.	2.8	33
33	Myocardial blood flow and adenosine A_{2A} receptor density in endurance athletes and untrained men. Journal of Physiology, 2008, 586, 5193-5202.	2.9	32
34	Branched-Chain Amino Acid Levels Are Related with Surrogates of Disturbed Lipid Metabolism among Older Men. Frontiers in Medicine, 2016, 3, 57.	2.6	32
35	Effects of training and anabolic steroids on collagen synthesis in dog heart. European Journal of Applied Physiology and Occupational Physiology, 1991, 62, 1-6.	1.2	31
36	Effects of Diet-Induced Obesity and Voluntary Wheel Running on Bone Properties in Young Male C57BL/6J Mice. Calcified Tissue International, 2010, 86, 411-419.	3.1	31

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37	Associations of Aerobic Fitness and Maximal Muscular Strength With Metabolites in Young Men. JAMA Network Open, 2019, 2, e198265.	5.9	30
38	Alternative mRNA Splicing of the Novel GTPase Rab28 Generates Isoforms with Different C-Termini. FEBS Journal, 1996, 237, 833-840.	0.2	29
39	Effect of diet composition on acidâ€“base balance in adolescents, young adults and elderly at rest and during exercise. European Journal of Clinical Nutrition, 2015, 69, 399-404.	2.9	29
40	A New Biodegradable Stent for the Pancreaticojejunal Anastomosis After Pancreaticoduodenal Resection: In Vitro Examination and Pilot Experiences in Humans. Pancreas, 2000, 21, 14-21.	1.1	28
41	Effects of streptozotocin-induced diabetes and physical training on gene expression of extracellular matrix proteins in mouse skeletal muscle. American Journal of Physiology - Endocrinology and Metabolism, 2006, 290, E900-E907.	3.5	28
42	Low-protein vegetarian diet does not have a short-term effect on blood acidâ€“base status but raises oxygen consumption during submaximal cycling. Journal of the International Society of Sports Nutrition, 2012, 9, 50.	3.9	27
43	Selective breeding for endurance running capacity affects cognitive but not motor learning in rats. Physiology and Behavior, 2012, 106, 95-100.	2.1	27
44	Effects of muscular dystrophy, exercise and blocking activin receptor IIB ligands on the unfolded protein response and oxidative stress. Free Radical Biology and Medicine, 2016, 99, 308-322.	2.9	27
45	Corrected whole blood biomarkers - the equationÂof Dill and Costill revisited. Physiological Reports, 2018, 6, e13749.	1.7	26
46	Small bowel T cells, HLA class II antigen DR, and GroEL stress protein in IgA nephropathy. Kidney International, 1999, 55, 2274-2280.	5.2	25
47	In vivo and in vitro degradation of a novel bioactive guided tissue regeneration membrane. International Journal of Oral and Maxillofacial Surgery, 2006, 35, 727-732.	1.5	25
48	Small bowel cyclooxygenase 2 (COX-2) expression in patients with IgA nephropathy. Kidney International, 2005, 67, 2187-2195.	5.2	24
49	Effects of streptozotocin-induced diabetes and physical training on gene expression of titin-based stretch-sensing complexes in mouse striated muscle. American Journal of Physiology - Endocrinology and Metabolism, 2007, 292, E533-E542.	3.5	23
50	High-fat feeding induces angiogenesis in skeletal muscle and activates angiogenic pathways in capillaries. Angiogenesis, 2013, 16, 297-307.	7.2	23
51	Lipid droplet-associated proteins in high-fat fed mice with the effects of voluntary running and diet change. Metabolism: Clinical and Experimental, 2014, 63, 1031-1040.	3.4	23
52	Treatment with soluble activin type IIB-receptor improves bone mass and strength in a mouse model of Duchenne muscular dystrophy. BMC Musculoskeletal Disorders, 2017, 18, 20.	1.9	23
53	Muscle Inactivity Is Adversely Associated with Biomarkers in Physically Active Adults. Medicine and Science in Sports and Exercise, 2015, 47, 1188-1196.	0.4	22
54	Enterobacter cloacae administration induces hepatic damage and subcutaneous fat accumulation in high-fat diet fed mice. PLoS ONE, 2018, 13, e0198262.	2.5	22

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55	Myostatin/activin blocking combined with exercise reconditions skeletal muscle expression profile of mdx mice. Molecular and Cellular Endocrinology, 2015, 399, 131-142.	3.2	21
56	Short-term bone biochemical response to a single bout of high-impact exercise. Journal of Sports Science and Medicine, 2009, 8, 553-9.	1.6	20
57	A novel human glycosyltransferase: primary structure and characterization of the gene and transcripts. Biochemical and Biophysical Research Communications, 2003, 309, 166-174.	2.1	19
58	iGEMS: an integrated model for identification of alternative exon usage events. Nucleic Acids Research, 2016, 44, e109-e109.	14.5	18
59	Effects of acute exercise, exercise training, and diabetes on the expression of lymphangiogenic growth factors and lymphatic vessels in skeletal muscle. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H2573-H2579.	3.2	17
60	Striated muscle-specific serine/threonine-protein kinase beta segregates with high versus low responsiveness to endurance exercise training. Physiological Genomics, 2020, 52, 35-46.	2.3	17
61	TGF-Î² induces the expression of SAP30L, a novel nuclear protein. BMC Genomics, 2003, 4, 53.	2.8	16
62	Dissociation of the effects of training on oxidative metabolism, glucose utilisation and GLUT4 levels in skeletal muscle of streptozotocin-diabetic rats. Pflugers Archiv European Journal of Physiology, 1994, 427, 444-449.	2.8	15
63	DAPIT Over-Expression Modulates Glucose Metabolism and Cell Behaviour in HEK293T Cells. PLoS ONE, 2015, 10, e0131990.	2.5	14
64	Redistribution of glucose uptake by chronic exercise, measured in isolated perfused rat hearts. Pflugers Archiv European Journal of Physiology, 1985, 403, 296-300.	2.8	13
65	Enterochromaffin cell density in the gastric mucosa of patients with chronic renal failure. Apmis, 1996, 104, 362-366.	2.0	13
66	Gene expression in TGFbeta-induced epithelial cell differentiation in a three-dimensional intestinal epithelial cell differentiation model. BMC Genomics, 2006, 7, 279.	2.8	13
67	Intrinsic aerobic capacity governs the associations between gut microbiota composition and fat metabolism age-dependently in rat siblings. Physiological Genomics, 2017, 49, 733-746.	2.3	13
68	Differentially expressed CC3/TIP30 and rab11 along in vivo and in vitro intestinal epithelial cell crypt-villus axis. Life Sciences, 2001, 69, 1363-1372.	4.3	12
69	Physiological adaptations to resistance training in rats selectively bred for low and high response to aerobic exercise training. Experimental Physiology, 2018, 103, 1513-1523.	2.0	12
70	Voluntary Running Aids to Maintain High Body Temperature in Rats Bred for High Aerobic Capacity. Frontiers in Physiology, 2016, 7, 311.	2.8	10
71	Murine Ortholog of the Novel Glycosyltransferase, B3GTL: Primary Structure, Characterization of the Gene and Transcripts, and Expression in Tissues. DNA and Cell Biology, 2006, 25, 465-474.	1.9	9
72	Lung autophagic response following exposure of mice to whole body irradiation, with and without amifostine. Biochemical and Biophysical Research Communications, 2011, 404, 552-558.	2.1	9

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73	Higher glucose availability augments the metabolic responses of the C2C12 myotubes to exercise-like electrical pulse stimulation. American Journal of Physiology - Endocrinology and Metabolism, 2021, 321, E229-E245.	3.5	9
74	Reverse Transcription-Polymerase Chain Reaction in the Diagnosis of Helicobacter pylori Infection in Finnish Children. Journal of Pediatric Gastroenterology and Nutrition, 1999, 28, 252-256.	1.8	9
75	Rats Bred for Low Aerobic Capacity Become Promptly Fatigued and Have Slow Metabolic Recovery after Stimulated, Maximal Muscle Contractions. PLoS ONE, 2012, 7, e48345.	2.5	9
76	Effects of Training on Regional Substrate Oxidation in the Hearts of Ageing Rats. Gerontology, 1989, 35, 289-296.	2.8	8
77	Validation of a method to measure total spontaneous physical activity of sedentary and voluntary running mice. Journal of Neuroscience Methods, 2014, 235, 51-58.	2.5	8
78	Interactive effects of aging and aerobic capacity on energy metabolismâ€“related metabolites of serum, skeletal muscle, and white adipose tissue. GeroScience, 2021, 43, 2679-2691.	4.6	8
79	Leisureâ€time physical activity and artery lumen diameters: A monozygotic coâ€twin control study. Scandinavian Journal of Medicine and Science in Sports, 2011, 21, e208-14.	2.9	7
80	Extraction of Input Function from Rat [18F]FDG PET Images. Molecular Imaging and Biology, 2011, 13, 1241-1249.	2.6	7
81	Fat oxidation at rest and during exercise in male monozygotic twins. European Journal of Applied Physiology, 2019, 119, 2711-2722.	2.5	7
82	Branched-Chain Amino Acid Deprivation Decreases Lipid Oxidation and Lipogenesis in C2C12 Myotubes. Metabolites, 2022, 12, 328.	2.9	7
83	Predictors of increase in physical activity during a 6-month follow-up period among overweight and physically inactive healthy young adults. Journal of Exercise Science and Fitness, 2015, 13, 63-71.	2.2	6
84	Beneficial effects of running and milk protein supplements on Sirtuins and risk factors of metabolic disorders in rats with low aerobic capacity. Metabolism Open, 2019, 4, 100019.	2.9	6
85	Rats bred for low intrinsic aerobic exercise capacity link obesity with brain inflammation and reduced structural plasticity of the hippocampus. Brain, Behavior, and Immunity, 2021, 97, 250-259.	4.1	6
86	Vertical ground reaction force measurements and video measurements provide comparable estimates of distance moved by mice during artificial light and dark periods. Journal of Neuroscience Methods, 2011, 197, 104-108.	2.5	4
87	Rats with elevated genetic risk for metabolic syndrome exhibit cognitive deficiencies when young. Physiology and Behavior, 2021, 236, 113417.	2.1	3
88	Enlarged PLIN5-uncoated lipid droplets in inner regions of skeletal muscle type II fibers associate with type 2 diabetes. Acta Histochemica, 2022, 124, 151869.	1.8	3
89	Molecular adaptations of voltageâ€gated sodium ion channel related proteins after fatiguing stretchâ€shortening cycle exercise. Scandinavian Journal of Medicine and Science in Sports, 2008, 18, 636-642.	2.9	2
90	Run more, perform betterâ€”old truth revisited. Journal of Applied Physiology, 2009, 106, 1477-1478.	2.5	2

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91	CHI3L1 - a novel myokine. Acta Physiologica, 2016, 216, 260-261.	3.8	2
92	A collagen extraction and deuterium oxide stable isotope tracer method for the quantification of bone collagen synthesis rates in vivo. Physiological Reports, 2021, 9, e14799.	1.7	2
93	Model ecosystem for environmental transport of xenobiotics. Archives of Environmental Contamination and Toxicology, 1982, 11, 419-424.	4.1	1
94	Effects of aerobic and strength training on aerobic capacity, muscle strength, and gene expression of lymphomonocytes in patients with stable CAD. American Journal of Translational Research (discontinued), 2020, 12, 4582-4593.	0.0	1
95	Development of Rat Models for Low and High Response to Exercise Training. Medicine and Science in Sports and Exercise, 2010, 42, 61-62.	0.4	0
96	Physical training attenuates gene expression of ubiquitinâ€proteasome pathway in diabetic mouse skeletal muscle. FASEB Journal, 2007, 21, A837.	0.5	0
97	Leisure Time Physical Activity And Body Fat: A Twin Study. Medicine and Science in Sports and Exercise, 2009, 41, 514-515.	0.4	0
98	Reply to Murphy and Lamb. Journal of Applied Physiology, 2009, 106, 2069-2069.	2.5	0
99	Increased PDK4 expression via PGCâ€1Î±/ERRÎ± â€“ dependent mechanism in mouse skeletal muscle after high fat feeding. FASEB Journal, 2010, 24, 987.5.	0.5	0
100	Rats selectively bred for low aerobic capacity become promptly fatigued and have slow metabolic recovery after stimulated muscle contractions. FASEB Journal, 2010, 24, 1045.12.	0.5	0
101	Long lasting high fat feeding increases the capillary density in the skeletal muscle of mice. FASEB Journal, 2010, 24, 1031.6.	0.5	0
102	The Role of PDK4 in High Fat Diet - Induced Insulin Resistance. Medicine and Science in Sports and Exercise, 2010, 42, 91.	0.4	0
103	High Fat Feeding Increases The Capillary Density In The Skeletal Muscle Of Mice. Medicine and Science in Sports and Exercise, 2010, 42, 67.	0.4	0
104	Rats Bred For Low Aerobic Capacity Become Rapidly Fatigued And Have Slow Metabolic Recovery After Stimulated Muscle Contractions. Medicine and Science in Sports and Exercise, 2010, 42, 54.	0.4	0
105	Artificial Selection for High Aerobic Capacity is Protective against Weight Gain via Thermogenesis?. FASEB Journal, 2012, 26, 1073.5.	0.5	0
106	TopoCell â€“ An image analysis tool to study intracellular topography. FASEB Journal, 2012, 26, 578.2.	0.5	0
107	Blocking of myostatin and activins increase muscle protein synthesis and mTORC1 signaling but decreases capillary density. FASEB Journal, 2012, 26, 1075.2.	0.5	0
108	Treatment with soluble activin type IIB-receptor improves bone mass and strength in a mouse model of duchenne muscular dystrophy. Bone Abstracts, 0, , .	0.0	0

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109	PO-201 Aging attenuates the effect of aerobic capacity in muscle and serum metabolic profile but not in white adipose tissue. Exercise Biochemistry Review, 2018, 1, .	0.0	0