

Roberto Bottinelli

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122
papers

10,817
citations

56
h-index

103
g-index

162
ext. papers

11,925
ext. citations

7.3
avg, IF

5.62
L-index

#	Paper	IF	Citations
122	Mesoangioblast stem cells ameliorate muscle function in dystrophic dogs. <i>Nature</i> , 2006 , 444, 574-9	50.4	615
121	Cell therapy of alpha-sarcoglycan null dystrophic mice through intra-arterial delivery of mesoangioblasts. <i>Science</i> , 2003 , 301, 487-92	33.3	542
120	Force-velocity properties of human skeletal muscle fibres: myosin heavy chain isoform and temperature dependence. <i>Journal of Physiology</i> , 1996 , 495 (Pt 2), 573-86	3.9	370
119	Force-velocity relations and myosin heavy chain isoform compositions of skinned fibres from rat skeletal muscle. <i>Journal of Physiology</i> , 1991 , 437, 655-72	3.9	364
118	Branched-chain amino acid supplementation promotes survival and supports cardiac and skeletal muscle mitochondrial biogenesis in middle-aged mice. <i>Cell Metabolism</i> , 2010 , 12, 362-372	24.6	351
117	The effect of ageing and immobilization on structure and function of human skeletal muscle fibres. <i>Journal of Physiology</i> , 2003 , 552, 499-511	3.9	339
116	Human skeletal muscle fibres: molecular and functional diversity. <i>Progress in Biophysics and Molecular Biology</i> , 2000 , 73, 195-262	4.7	334
115	Human circulating AC133(+) stem cells restore dystrophin expression and ameliorate function in dystrophic skeletal muscle. <i>Journal of Clinical Investigation</i> , 2004 , 114, 182-95	15.9	271
114	Unloaded shortening velocity and myosin heavy chain and alkali light chain isoform composition in rat skeletal muscle fibres. <i>Journal of Physiology</i> , 1994 , 478 (Pt 2), 341-9	3.9	260
113	Functional and morphological recovery of dystrophic muscles in mice treated with deacetylase inhibitors. <i>Nature Medicine</i> , 2006 , 12, 1147-50	50.5	258
112	ATP consumption and efficiency of human single muscle fibers with different myosin isoform composition. <i>Biophysical Journal</i> , 2000 , 79, 945-61	2.9	256
111	Whole-muscle and single-fibre contractile properties and myosin heavy chain isoforms in humans. <i>Pflugers Archiv European Journal of Physiology</i> , 1996 , 432, 913-20	4.6	248
110	Targeted ablation of IKK2 improves skeletal muscle strength, maintains mass, and promotes regeneration. <i>Journal of Clinical Investigation</i> , 2006 , 116, 2945-54	15.9	236
109	Autophagy impairment in muscle induces neuromuscular junction degeneration and precocious aging. <i>Cell Reports</i> , 2014 , 8, 1509-21	10.6	223
108	Transplantation of genetically corrected human iPSC-derived progenitors in mice with limb-girdle muscular dystrophy. <i>Science Translational Medicine</i> , 2012 , 4, 140ra89	17.5	215
107	Autologous transplantation of muscle-derived CD133+ stem cells in Duchenne muscle patients. <i>Cell Transplantation</i> , 2007 , 16, 563-77	4	190
106	Facioscapulohumeral muscular dystrophy in mice overexpressing FRG1. <i>Nature</i> , 2006 , 439, 973-7	50.4	185

105	Restoration of human dystrophin following transplantation of exon-skipping-engineered DMD patient stem cells into dystrophic mice. <i>Cell Stem Cell</i> , 2007 , 1, 646-57	18	181
104	Myofibrillar ATPase activity in skinned human skeletal muscle fibres: fibre type and temperature dependence. <i>Journal of Physiology</i> , 1996 , 493 (Pt 2), 299-307	3.9	179
103	Orthologous myosin isoforms and scaling of shortening velocity with body size in mouse, rat, rabbit and human muscles. <i>Journal of Physiology</i> , 2003 , 546, 677-89	3.9	157
102	Myofibrillar ATPase activity during isometric contraction and isomyosin composition in rat single skinned muscle fibres. <i>Journal of Physiology</i> , 1994 , 481 (Pt 3), 663-75	3.9	155
101	Functional heterogeneity of mammalian single muscle fibres: do myosin isoforms tell the whole story?. <i>Pflugers Archiv European Journal of Physiology</i> , 2001 , 443, 6-17	4.6	150
100	Nitric oxide release combined with nonsteroidal antiinflammatory activity prevents muscular dystrophy pathology and enhances stem cell therapy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 264-9	11.5	145
99	PGC1- β over-expression prevents metabolic alterations and soleus muscle atrophy in hindlimb unloaded mice. <i>Journal of Physiology</i> , 2014 , 592, 4575-89	3.9	136
98	A mutant tropomyosin that causes hypertrophic cardiomyopathy is expressed in vivo and associated with an increased calcium sensitivity. <i>Circulation Research</i> , 1998 , 82, 106-15	15.7	135
97	Two independent mechanical events in the interaction cycle of skeletal muscle myosin with actin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 87-92	11.5	129
96	Respiratory muscle fibres: specialisation and plasticity. <i>Thorax</i> , 2004 , 59, 808-17	7.3	129
95	Specific contributions of various muscle fibre types to human muscle performance: an in vitro study. <i>Journal of Electromyography and Kinesiology</i> , 1999 , 9, 87-95	2.5	129
94	The human muscle proteome in aging. <i>Journal of Proteome Research</i> , 2006 , 5, 1344-53	5.6	126
93	Body-wide gene therapy of Duchenne muscular dystrophy in the mdx mouse model. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 3758-63	11.5	123
92	Stem cell-mediated transfer of a human artificial chromosome ameliorates muscular dystrophy. <i>Science Translational Medicine</i> , 2011 , 3, 96ra78	17.5	119
91	The time course of the adaptations of human muscle proteome to bed rest and the underlying mechanisms. <i>Journal of Physiology</i> , 2012 , 590, 5211-30	3.9	115
90	Skeletal muscle hypertrophy and structure and function of skeletal muscle fibres in male body builders. <i>Journal of Physiology</i> , 2006 , 570, 611-27	3.9	115
89	Requirement for the ryanodine receptor type 3 for efficient contraction in neonatal skeletal muscles. <i>EMBO Journal</i> , 1997 , 16, 6956-63	13	112
88	The role of alterations in mitochondrial dynamics and PGC-1 β over-expression in fast muscle atrophy following hindlimb unloading. <i>Journal of Physiology</i> , 2015 , 593, 1981-95	3.9	108

87	Electrical stimulation for neuromuscular testing and training: state-of-the art and unresolved issues. <i>European Journal of Applied Physiology</i> , 2011 , 111, 2391-7	3.4	101
86	Maximum shortening velocity and coexistence of myosin heavy chain isoforms in single skinned fast fibres of rat skeletal muscle. <i>Journal of Muscle Research and Cell Motility</i> , 1994 , 15, 413-9	3.5	100
85	Neuromuscular electrical stimulation training induces atypical adaptations of the human skeletal muscle phenotype: a functional and proteomic analysis. <i>Journal of Applied Physiology</i> , 2011 , 110, 433-50	3.7	99
84	Ultrafast force-clamp spectroscopy of single molecules reveals load dependence of myosin working stroke. <i>Nature Methods</i> , 2012 , 9, 1013-9	21.6	98
83	Fibre types in skeletal muscles of chronic obstructive pulmonary disease patients related to respiratory function and exercise tolerance. <i>European Respiratory Journal</i> , 1997 , 10, 2853-60	13.6	96
82	Redox homeostasis, oxidative stress and disuse muscle atrophy. <i>Journal of Physiology</i> , 2011 , 589, 2147-60	9.9	91
81	What limits the velocity of fast-skeletal muscle contraction in mammals?. <i>Journal of Molecular Biology</i> , 2006 , 355, 432-42	6.5	91
80	Chemo-mechanical energy transduction in relation to myosin isoform composition in skeletal muscle fibres of the rat. <i>Journal of Physiology</i> , 1997 , 502 (Pt 2), 449-60	3.9	88
79	High mobility group box 1 orchestrates tissue regeneration via CXCR4. <i>Journal of Experimental Medicine</i> , 2018 , 215, 303-318	16.6	84
78	Targeted ablation of IKK2 improves skeletal muscle strength, maintains mass, and promotes regeneration. <i>Journal of Clinical Investigation</i> , 2007 , 117, 277-277	15.9	78
77	Deterioration of contractile properties of muscle fibres in elderly subjects is modulated by the level of physical activity. <i>European Journal of Applied Physiology</i> , 2007 , 100, 603-11	3.4	76
76	Differing ADP release rates from myosin heavy chain isoforms define the shortening velocity of skeletal muscle fibers. <i>Journal of Biological Chemistry</i> , 2001 , 276, 45902-8	5.4	75
75	T and B lymphocyte depletion has a marked effect on the fibrosis of dystrophic skeletal muscles in the scid/mdx mouse. <i>Journal of Pathology</i> , 2007 , 213, 229-38	9.4	73
74	Fast fibres in a large animal: fibre types, contractile properties and myosin expression in pig skeletal muscles. <i>Journal of Experimental Biology</i> , 2004 , 207, 1875-86	3	72
73	Sprint training, in vitro and in vivo muscle function, and myosin heavy chain expression. <i>Journal of Applied Physiology</i> , 1998 , 84, 442-9	3.7	71
72	Shortening velocity and myosin and myofibrillar ATPase activity related to myosin isoenzyme composition during postnatal development in rat myocardium. <i>Circulation Research</i> , 1989 , 65, 446-57	15.7	68
71	Is oxidative stress a cause or consequence of disuse muscle atrophy in mice? A proteomic approach in hindlimb-unloaded mice. <i>Experimental Physiology</i> , 2010 , 95, 331-50	2.4	64
70	In vivo generation of a mature and functional artificial skeletal muscle. <i>EMBO Molecular Medicine</i> , 2015 , 7, 411-22	12	63

69	Neuromuscular adaptations to electrostimulation resistance training. <i>American Journal of Physical Medicine and Rehabilitation</i> , 2006 , 85, 167-75	2.6	60
68	The mechanism of the force response to stretch in human skinned muscle fibres with different myosin isoforms. <i>Journal of Physiology</i> , 2004 , 554, 335-52	3.9	60
67	Antioxidant treatment of hindlimb-unloaded mouse counteracts fiber type transition but not atrophy of disused muscles. <i>Pharmacological Research</i> , 2010 , 61, 553-63	10.2	58
66	Myosin and actin content of human skeletal muscle fibers following 35 days bed rest. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2010 , 20, 65-73	4.6	54
65	Response to caffeine and ryanodine receptor isoforms in mouse skeletal muscles. <i>American Journal of Physiology - Cell Physiology</i> , 2001 , 281, C585-94	5.4	52
64	Skeletal muscle fibre diversity and the underlying mechanisms. <i>Acta Physiologica</i> , 2010 , 199, 465-76	5.6	49
63	Focal adhesion kinase is a load-dependent governor of the slow contractile and oxidative muscle phenotype. <i>Journal of Physiology</i> , 2009 , 587, 3703-17	3.9	49
62	Physiological and functional evaluation of healthy young and older men and women: design of the European MyoAge study. <i>Biogerontology</i> , 2013 , 14, 325-37	4.5	46
61	Effects of resistance training on myosin function studied by the in vitro motility assay in young and older men. <i>Journal of Applied Physiology</i> , 2005 , 98, 2390-5	3.7	45
60	Single muscle fiber properties in aging and disuse. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2010 , 20, 10-9	4.6	44
59	Skeletal muscle adaptations to physical inactivity and subsequent retraining in young men. <i>Biogerontology</i> , 2013 , 14, 247-59	4.5	42
58	Effects of voluntary wheel running and amino acid supplementation on skeletal muscle of mice. <i>European Journal of Applied Physiology</i> , 2005 , 93, 655-64	3.4	42
57	FoxO-dependent atrogenes vary among catabolic conditions and play a key role in muscle atrophy induced by hindlimb suspension. <i>Journal of Physiology</i> , 2017 , 595, 1143-1158	3.9	41
56	Structure and function of human muscle fibres and muscle proteome in physically active older men. <i>Journal of Physiology</i> , 2017 , 595, 4823-4844	3.9	38
55	Clenbuterol antagonizes glucocorticoid-induced atrophy and fibre type transformation in mice. <i>Experimental Physiology</i> , 2004 , 89, 89-100	2.4	38
54	Diaphragm Atrophy and Weakness in the Absence of Mitochondrial Dysfunction in the Critically Ill. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2017 , 196, 1544-1558	10.2	36
53	Chimeric adeno-associated virus/antisense U1 small nuclear RNA effectively rescues dystrophin synthesis and muscle function by local treatment of mdx mice. <i>Human Gene Therapy</i> , 2006 , 17, 565-74	4.8	36
52	Contractile properties and myosin heavy chain isoform composition in single fibre of human laryngeal muscles. <i>Journal of Muscle Research and Cell Motility</i> , 2002 , 23, 187-95	3.5	35

51	The descending limb of the sarcomere length-force relation in single muscle fibres of the frog. <i>Journal of Muscle Research and Cell Motility</i> , 1985 , 6, 585-600	3.5	35
50	Contractile impairment and structural alterations of skeletal muscles from knockout mice lacking type 1 and type 3 ryanodine receptors. <i>FEBS Letters</i> , 1998 , 422, 160-4	3.8	34
49	Functional diversity between orthologous myosins with minimal sequence diversity. <i>Journal of Muscle Research and Cell Motility</i> , 2000 , 21, 375-82	3.5	33
48	The KATP channel is a molecular sensor of atrophy in skeletal muscle. <i>Journal of Physiology</i> , 2010 , 588, 773-84	3.9	31
47	Resistance training of long duration modulates force and unloaded shortening velocity of single muscle fibres of young women. <i>Journal of Electromyography and Kinesiology</i> , 2009 , 19, e290-300	2.5	29
46	Structural and functional alterations of muscle fibres in the novel mouse model of facioscapulohumeral muscular dystrophy. <i>Journal of Physiology</i> , 2007 , 584, 997-1009	3.9	29
45	Maximum speed of shortening and ATPase activity in atrial and ventricular myocardia of hyperthyroid rats. <i>American Journal of Physiology - Cell Physiology</i> , 1995 , 269, C785-90	5.4	29
44	Cortisone-induced changes in myosin heavy chain distribution in respiratory and hindlimb muscles. <i>Acta Physiologica Scandinavica</i> , 1994 , 151, 353-61		29
43	Altered contractile properties of rat cardiac muscle during experimental thiamine deficiency and food deprivation. <i>Journal of Molecular and Cellular Cardiology</i> , 1990 , 22, 1095-106	5.8	29
42	Statin or fibrate chronic treatment modifies the proteomic profile of rat skeletal muscle. <i>Biochemical Pharmacology</i> , 2011 , 81, 1054-64	6	27
41	Sarcolab pilot study into skeletal muscle adaptation to long-term spaceflight. <i>Npj Microgravity</i> , 2018 , 4, 18	5.3	27
40	Long-term resistance training improves force and unloaded shortening velocity of single muscle fibres of elderly women. <i>European Journal of Applied Physiology</i> , 2008 , 104, 885-93	3.4	25
39	Is stepwise sarcomere shortening an artefact?. <i>Nature</i> , 1984 , 307, 653-5	50.4	25
38	Reduction of Movement in Neurological Diseases: Effects on Neural Stem Cells Characteristics. <i>Frontiers in Neuroscience</i> , 2018 , 12, 336	5.1	23
37	Human skeletal muscle fibre contractile properties and proteomic profile: adaptations to 3 weeks of unilateral lower limb suspension and active recovery. <i>Journal of Physiology</i> , 2015 , 593, 5361-85	3.9	23
36	Absence of T and B lymphocytes modulates dystrophic features in dysferlin deficient animal model. <i>Experimental Cell Research</i> , 2012 , 318, 1160-74	4.2	22
35	Speeds of Actin Translocation in Vitro by Myosins Extracted from Single Rat Muscle Fibres of Different Types. <i>Experimental Physiology</i> , 1999 , 84, 803-806	2.4	20
34	Quantitative and qualitative adaptations of muscle fibers to glucocorticoids. <i>Muscle and Nerve</i> , 2015 , 52, 631-9	3.4	19

33	New techniques in linear and non-linear laser optics in muscle research. <i>Journal of Muscle Research and Cell Motility</i> , 2006 , 27, 469-79	3.5	19
32	Temperature dependence of speed of actin filaments propelled by slow and fast skeletal myosin isoforms. <i>Journal of Applied Physiology</i> , 2005 , 99, 2239-45	3.7	19
31	Force-velocity properties and myosin light chain isoform composition of an identified type of skinned fibres from rat skeletal muscle. <i>Pflugers Archiv European Journal of Physiology</i> , 1995 , 429, 592-4	4.6	18
30	Molecular mechanism regulating myosin and cardiac functions by ELC. <i>Biochemical and Biophysical Research Communications</i> , 2014 , 450, 464-9	3.4	17
29	Sarcomeric Myosin Isoforms: Fine Tuning of a Molecular Motor. <i>Physiology</i> , 2000 , 15, 26-33	9.8	17
28	Recovery from 6-month spaceflight at the International Space Station: muscle-related stress into a proinflammatory setting. <i>FASEB Journal</i> , 2019 , 33, 5168-5180	0.9	15
27	Lack of functional effects of neuromuscular electrical stimulation on skeletal muscle oxidative metabolism in healthy humans. <i>Journal of Applied Physiology</i> , 2012 , 113, 1101-9	3.7	14
26	Myosin content of single muscle fibers following short-term disuse and active recovery in young and old healthy men. <i>Experimental Gerontology</i> , 2017 , 87, 100-107	4.5	13
25	Essential amino acids improve insulin activation of AKT/MTOR signaling in soleus muscle of aged rats. <i>International Journal of Immunopathology and Pharmacology</i> , 2010 , 23, 81-9	3	13
24	Effects of acidosis on maximum shortening velocity and force-velocity relation of skinned rat cardiac muscle. <i>Journal of Molecular and Cellular Cardiology</i> , 1994 , 26, 601-7	5.8	13
23	Actin sliding velocity on pure myosin isoforms from hindlimb unloaded mice. <i>Acta Physiologica</i> , 2014 , 212, 316-29	5.6	12
22	Variability in muscle adaptation to electrical stimulation. <i>International Journal of Sports Medicine</i> , 2013 , 34, 544-53	3.6	12
21	The dual effect of thyroid hormones on contractile properties of rat myocardium. <i>Pflugers Archiv European Journal of Physiology</i> , 1988 , 411, 620-7	4.6	12
20	Actomyosin kinetics of pure fast and slow rat myosin isoforms studied by in vitro motility assay approach. <i>Experimental Physiology</i> , 2012 , 97, 873-81	2.4	11
19	Effects of amrinone on shortening velocity and force development in skinned skeletal muscle fibres. <i>Journal of Muscle Research and Cell Motility</i> , 1993 , 14, 110-20	3.5	11
18	Nitric oxide prevents atorvastatin-induced skeletal muscle dysfunction and alterations in mice. <i>Muscle and Nerve</i> , 2013 , 47, 72-80	3.4	10
17	Exercise training in Tg β 44 mice during the progression of chronic heart failure: cardiac vs. peripheral (soleus muscle) impairments to oxidative metabolism. <i>Journal of Applied Physiology</i> , 2017 , 123, 326-336	3.7	9
16	Actin sliding velocity on pure myosin isoforms from dystrophic mouse muscles. <i>Muscle and Nerve</i> , 2009 , 40, 249-56	3.4	8

15	Relaxation in atrial and ventricular myocardium: activation decay and different load sensitivity. <i>Basic Research in Cardiology</i> , 1983 , 78, 256-65	11.8	8
14	Ca ²⁺ release induced by cyclic ADP ribose in mice lacking type 3 ryanodine receptor. <i>Biochemical and Biophysical Research Communications</i> , 2001 , 288, 697-702	3.4	7
13	Postextrasystolic potentiation in isolated rat myocardium: dependence on resting muscle length. <i>Pflügers Archiv European Journal of Physiology</i> , 1984 , 402, 321-4	4.6	7
12	Effects of Amrinone on shortening velocity, force development and ATPase activity of demembrated preparations of rat ventricular myocardium. <i>Acta Physiologica Scandinavica</i> , 1992 , 146, 21-30		6
11	Voluntary physical activity counteracts Chronic Heart Failure progression affecting both cardiac function and skeletal muscle in the transgenic Tg β *44 mouse model. <i>Physiological Reports</i> , 2019 , 7, e14161	2.6	5
10	Rebalancing expression of HMGB1 redox isoforms to counteract muscular dystrophy. <i>Science Translational Medicine</i> , 2021 , 13,	17.5	5
9	Sarcomere R _g iveR during stretch of frog single muscle fibres with added series compliance. <i>Quarterly Journal of Experimental Physiology (Cambridge, England)</i> , 1989 , 74, 215-7		4
8	Acute and chronic tirasemtiv treatment improves in vivo and in vitro muscle performance in actin-based nemaline myopathy mice. <i>Human Molecular Genetics</i> , 2021 , 30, 1305-1320	5.6	4
7	Ultra-fast force-clamp spectroscopy data on the interaction between skeletal muscle myosin and actin. <i>Data in Brief</i> , 2019 , 25, 104017	1.2	3
6	Sampaolesi et al. reply. <i>Nature</i> , 2007 , 450, E23-E25	50.4	3
5	Myosin II: Sarcomeric Myosins, The Motors Of Contraction In Cardiac And Skeletal Muscles 2008 , 125-169		2
4	Structural and molecular adaptations to dexamethasone and unacylated ghrelin administration in skeletal muscle of the mice. <i>Journal of Physiology and Pharmacology</i> , 2018 , 69,	2.1	2
3	A digital electronic decoder for monitoring muscle fibre sarcomere lengths using a photodiode array diffractometer. <i>Measurement Science and Technology</i> , 1990 , 1, 189-194	2	
2	Chimeric Adeno-Associated Virus/Antisense U1 Small Nuclear RNA Effectively Rescues Dystrophin Synthesis and Muscle Function by Local Treatment of mdx Mice. <i>Human Gene Therapy</i> , 2006 , 060801084750006	4.8	
1	Cellular and Molecular Mechanisms of Skeletal Muscle Plasticity 2007 , 3-22		