Gabriella Piazzesi

List of Publications by Year
in descending order

69 papers	4,246 citations	136885 32 h-index	110317 64 g-index
70 all docs	70 docs citations	70 times ranked	1445 citing authors

#	Article	IF	Citations
1	Dependence of thick filament structure in relaxed mammalian skeletal muscle on temperature and interfilament spacing. Journal of General Physiology, 2021, 153, .	0.9	21
2	Myosin motors that cannot bind actin leave their folded OFF state on activation of skeletal muscle. Journal of General Physiology, 2021, 153, .	0.9	4
3	Contracting striated muscle has a dynamic Iâ€band spring with an undamped stiffness 100 times larger than the passive stiffness. Journal of Physiology, 2020, 598, 331-345.	1.3	21
4	Orthophosphate increases the efficiency of slow muscle-myosin isoform in the presence of omecamtiv mecarbil. Nature Communications, 2020, 11, 3405.	5.8	14
5	Straightening Out the Elasticity of Myosin Cross-Bridges. Biophysical Journal, 2020, 118, 994-1002.	0.2	9
6	Thick Filament Length Changes in Muscle Have Both Elastic and Structural Components. Biophysical Journal, 2019, 116, 983-984.	0.2	11
7	Low temperature traps myosin motors of mammalian muscle in a refractory state that prevents activation. Journal of General Physiology, 2019, 151, 1272-1286.	0.9	40
8	Inotropic interventions do not change the resting state of myosin motors during cardiac diastole. Journal of General Physiology, 2019, 151, 53-65.	0.9	31
9	The force and stiffness of myosin motors in the isometric twitch of a cardiac trabecula and the effect of the extracellular calcium concentration. Journal of Physiology, 2018, 596, 2581-2596.	1.3	17
10	The Off State of the Thick Filament of Cardiac Muscle is Not Affected by Inotropic Interventions Like the Increase in Diastolic Sarcomere Length or the Addition of a Beta-Adrenergic Effector. Biophysical Journal, 2018, 114, 314a.	0.2	0
11	Thick Filament Mechano-Sensing in Skeletal and Cardiac Muscles: A Common Mechanism Able to Adapt the Energetic Cost of the Contraction to the Task. Frontiers in Physiology, 2018, 9, 736.	1.3	58
12	Myosin filament activation in the heart is tuned to the mechanical task. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3240-3245.	3.3	112
13	Structural Changes in the Thick Filaments during Activation of Demembranated Skeletal Muscle Fibers. Biophysical Journal, 2017, 112, 181a.	0.2	2
14	Minimum number of myosin motors accounting for shortening velocity under zero load in skeletal muscle. Journal of Physiology, 2017, 595, 1127-1142.	1.3	32
15	Is muscle powered by springs or motors?. Journal of Muscle Research and Cell Motility, 2016, 37, 165-167.	0.9	12
16	Size and speed of the working stroke of cardiac myosin in situ. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3675-3680.	3.3	41
17	Force generation by skeletal muscle is controlled by mechanosensing in myosin filaments. Nature, 2015, 528, 276-279.	13.7	249
18	The myofilament elasticity and its effect on kinetics of force generation by the myosin motor. Archives of Biochemistry and Biophysics, 2014, 552-553, 108-116.	1.4	23

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19	The contributions of filaments and crossâ€bridges to sarcomere compliance in skeletal muscle. Journal of Physiology, 2014, 592, 3881-3899.	1.3	50
20	The nonâ€linear elasticity of the muscle sarcomere and the compliance of myosin motors. Journal of Physiology, 2014, 592, 1109-1118.	1.3	31
21	Sarcomereâ€length dependence of myosin filament structure in skeletal muscle fibres of the frog. Journal of Physiology, 2014, 592, 1119-1137.	1.3	62
22	Mechanics of myosin function in white muscle fibres of the dogfish, <i>Scyliorhinus canicula</i>. Journal of Physiology, 2012, 590, 1973-1988.	1.3	15
23	An integrated <i>in vitro</i> and <i>in situ</i> study of kinetics of myosin II from frog skeletal muscle. Journal of Physiology, 2012, 590, 1227-1242.	1.3	27
24	Sarcomere-Length Dependence of the Low Angle X-Ray Pattern from Skeletal Muscle Fibers at Rest and during Isometric Contraction. Biophysical Journal, 2012, 102, 147a-148a.	0.2	0
25	Motion of myosin head domains during activation and force development in skeletal muscle. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7236-7240.	3.3	59
26	The mechanism of the resistance to stretch of isometrically contracting single muscle fibres. Journal of Physiology, 2010, 588, 495-510.	1.3	42
27	Probing myosin structural conformation in vivo by second-harmonic generation microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7763-7768.	3.3	123
28	Structural changes in myosin motors and filaments during relaxation of skeletal muscle. Journal of Physiology, 2009, 587, 4509-4521.	1.3	28
29	The Effect of Myofilament Compliance on Kinetics of Force Generation by Myosin Motors in Muscle. Biophysical Journal, 2009, 96, 583-592.	0.2	36
30	The Extent And Speed Of The Myosin Motor Recruitment Following 1-5 Nm Stretch Per Half-sarcomere Of Single Frog Muscle Fibers. Biophysical Journal, 2009, 96, 617a.	0.2	0
31	Skeletal muscle resists stretch by rapid binding of the second motor domain of myosin to actin. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20114-20119.	3.3	95
32	Skeletal Muscle Performance Determined by Modulation of Number of Myosin Motors Rather Than Motor Force or Stroke Size. Cell, 2007, 131, 784-795.	13.5	274
33	Structural changes in the myosin filament and cross-bridges during active force development in single intact frog muscle fibres: stiffness and X-ray diffraction measurements. Journal of Physiology, 2006, 577, 971-984.	1.3	56
34	New techniques in linear and non-linear laser optics in muscle research. Journal of Muscle Research and Cell Motility, 2006, 27, 469-479.	0.9	31
35	Structure-Function Relation of the Myosin Motor in Striated Muscle. Annals of the New York Academy of Sciences, 2005, 1047, 232-247.	1.8	22
36	The structural basis of the increase in isometric force production with temperature in frog skeletal muscle. Journal of Physiology, 2005, 567, 459-469.	1.3	33

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37	Effect of temperature on the working stroke of muscle myosin. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13927-13932.	3.3	80
38	X-ray diffraction studies of the contractile mechanism in single muscle fibres. Philosophical Transactions of the Royal Society B: Biological Sciences, 2004, 359, 1883-1893.	1.8	33
39	The myosin motor in muscle generates a smaller and slower working stroke at higher load. Nature, 2004, 428, 578-581.	13.7	183
40	Ca-Activation and Stretch-Activation in Insect Flight Muscle. Biophysical Journal, 2004, 87, 1101-1111.	0.2	68
41	Temperature dependence of the forceâ€generating process in single fibres from frog skeletal muscle. Journal of Physiology, 2003, 549, 93-106.	1.3	99
42	The Conformation of Myosin Head Domains in Rigor Muscle Determined by X-Ray Interference. Biophysical Journal, 2003, 85, 1098-1110.	0.2	26
43	The size and the speed of the working stroke of muscle myosin and its dependence on the force. Journal of Physiology, 2002, 545, 145-151.	1.3	115
44	Mechanism of force generation by myosin heads in skeletal muscle. Nature, 2002, 415, 659-662.	13.7	133
45	Conformation of the myosin motor during force generation in skeletal muscle. Nature Structural Biology, 2000, 7, 482-485.	9.7	98
46	Interference fine structure and sarcomere length dependence of the axial x-ray pattern from active single muscle fibers. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 7226-7231.	3.3	110
47	Changes in conformation of myosin heads during the development of isometric contraction and rapid shortening in single frog muscle fibres. Journal of Physiology, 1999, 514, 305-312.	1.3	36
48	Elastic bending and active tilting of myosin heads during muscle contraction. Nature, 1998, 396, 383-387.	13.7	155
49	The Stiffness of Skeletal Muscle in Isometric Contraction and Rigor: The Fraction of Myosin Heads Bound to Actin. Biophysical Journal, 1998, 74, 2459-2473.	0.2	168
50	Myosin Head Movements during Isometric Contraction Studied by X-Ray Diffraction of Single Frog Muscle Fibres. Advances in Experimental Medicine and Biology, 1998, 453, 265-270.	0.8	2
51	On the Working Stroke Elicited by Steps in Length and Temperature. Advances in Experimental Medicine and Biology, 1998, 453, 259-264.	0.8	1
52	Cross-bridge kinetics studied with staircase shortening in single fibres from frog skeletal muscle. Journal of Muscle Research and Cell Motility, 1997, 18, 91-101.	0.9	8
53	Simulation of the rapid regeneration of the actin-myosin working stroke with a tight coupling model of muscle contraction. Journal of Muscle Research and Cell Motility, 1996, 17, 45-53.	0.9	15
54	Elastic distortion of myosin heads and repriming of the working stroke in muscle. Nature, 1995, 374, 553-555.	13.7	115

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55	A cross-bridge model that is able to explain mechanical and energetic properties of shortening muscle. Biophysical Journal, 1995, 68, 1966-1979.	0.2	196
56	The effect of hypertonicity on force generation in tetanized single fibres from frog skeletal muscle.. Journal of Physiology, 1994, 476, 531-546.	1.3	19
57	Kinetics of Regeneration of Cross-Bridge Power Stroke in Shortening Muscle. Advances in Experimental Medicine and Biology, 1993, 332, 691-701.	0.8	12
58	Tension transients during steady lengthening of tetanized muscle fibres of the frog.. Journal of Physiology, 1992, 445, 659-711.	1.3	87
59	Rapid regeneration of the actin-myosin power stroke in contracting muscle. Nature, 1992, 355, 638-641.	13.7	185
60	Myosin head movements are synchronous with the elementary force-generating process in muscle. Nature, 1992, 357, 156-158.	13.7	205
61	The contractile response during steady lengthening of stimulated frog muscle fibres.. Journal of Physiology, 1990, 431, 141-171.	1.3	276
62	The recovery of tension in transients during steady lengthening of frog muscle fibres. Pflugers Archiv European Journal of Physiology, 1989, 414, 245-247.	1.3	8
63	Stiffness of frog muscle fibres during rise of tension and relaxation in fixed-end or length-clamped tetani. Pflugers Archiv European Journal of Physiology, 1987, 409, 39-46.	1.3	31
64	A velocityâ€dependent shortening depression in the development of the forceâ€velocity relation in frog muscle fibres.. Journal of Physiology, 1986, 380, 227-238.	1.3	20
65	Enhancement by norepinephrine of automaticity in sheep cardiac Purkinje fibers exposed to hypoxic glucose-free Tyrode's solution: a role for alpha-adrenoceptors?. Circulation, 1986, 73, 180-188.	1.6	18
66	A low-cost microcomputer system for automated analysis of intracellular cardiac action potentials. Journal of Pharmacological Methods, 1984, 11, 61-66.	0.7	17
67	The development of the force-velocity relation in normal and dantrolene-treated frog single muscle fibres. Journal of Muscle Research and Cell Motility, 1983, 4, 395-404.	0.9	3
68	Barium-induced spontaneous activity in sheep cardiac Purkinje fibers. Journal of Molecular and Cellular Cardiology, 1983, 15, 697-711.	0.9	33
69	Development of activation and rise of tension in an isometric tetanus. Pflugers Archiv European Journal of Physiology, 1979, 381, 71-74.	1.3	10