

# Andrew A Biewener

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

155  
papers

9,115  
citations

53  
h-index

91  
g-index

176  
ext. papers

10,336  
ext. citations

6.4  
avg, IF

6.49  
L-index

#	Paper	IF	Citations
155	Lower-limb muscle function is influenced by changing mechanical demands in cycling. <i>Journal of Experimental Biology</i> , <b>2021</b> , 224,	3	1
154	Effect of muscle stimulation intensity on the heterogeneous function of regions within an architecturally complex muscle. <i>Journal of Applied Physiology</i> , <b>2021</b> , 130, 941-951	3.7	5
153	Task-dependent recruitment across ankle extensor muscles and between mechanical demands is driven by the metabolic cost of muscle contraction. <i>Journal of the Royal Society Interface</i> , <b>2021</b> , 18, 20200765	4.1	1
152	Functional morphology of the ankle extensor muscle-tendon units in the springhare <i>Pedetes capensis</i> shows convergent evolution with macropods for bipedal hopping locomotion. <i>Journal of Anatomy</i> , <b>2020</b> , 237, 568-578	2.9	1
151	Tuning of feedforward control enables stable muscle force-length dynamics after loss of autogenic proprioceptive feedback. <i>ELife</i> , <b>2020</b> , 9,	8.9	9
150	Broad similarities in shoulder muscle architecture and organization across two amniotes: implications for reconstructing non-mammalian synapsids. <i>PeerJ</i> , <b>2020</b> , 8, e8556	3.1	11
149	Post-activation muscle potentiation and its relevance to cyclical behaviours. <i>Biology Letters</i> , <b>2020</b> , 16, 20200255	3.6	3
148	Modulation of Flight Muscle Recruitment and Wing Rotation Enables Hummingbirds to Mitigate Aerial Roll Perturbations. <i>Current Biology</i> , <b>2020</b> , 30, 187-195.e4	6.3	3
147	Added mass in rat plantaris muscle causes a reduction in mechanical work. <i>Journal of Experimental Biology</i> , <b>2020</b> , 223,	3	4
146	Skeletal Muscle Shape Change in Relation to Varying Force Requirements Across Locomotor Conditions. <i>Frontiers in Physiology</i> , <b>2020</b> , 11, 143	4.6	4
145	The Evolution of a Single Toe in Horses: Causes, Consequences, and the Way Forward. <i>Integrative and Comparative Biology</i> , <b>2019</b> , 59, 638-655	2.8	5
144	Goats decrease hindlimb stiffness when walking over compliant surfaces. <i>Journal of Experimental Biology</i> , <b>2019</b> , 222,	3	4
143	Muscle-specific indices to characterise the functional behaviour of human lower-limb muscles during locomotion. <i>Journal of Biomechanics</i> , <b>2019</b> , 89, 134-138	2.9	16
142	force-length and activation dynamics of two distal rat hindlimb muscles in relation to gait and grade. <i>Journal of Experimental Biology</i> , <b>2019</b> , 222,	3	7
141	Three-dimensional mobility and muscle attachments in the pectoral limb of the Triassic cynodont <i>Massetognathus pascuali</i> (Romer, 1967). <i>Journal of Anatomy</i> , <b>2018</b> , 232, 383-406	2.9	17
140	Does a two-element muscle model offer advantages when estimating ankle plantar flexor forces during human cycling?. <i>Journal of Biomechanics</i> , <b>2018</b> , 68, 6-13	2.9	10
139	Evolutionary race as predators hunt prey. <i>Nature</i> , <b>2018</b> , 554, 176-178	50.4	

138	Foot-propelled swimming kinematics and turning strategies in common loons. <i>Journal of Experimental Biology</i> , <b>2018</b> , 221,	3	8
137	Animal Locomotion <b>2018</b> ,		49
136	Comparative hindlimb myology of foot-propelled swimming birds. <i>Journal of Anatomy</i> , <b>2018</b> , 232, 105-123	12.3	17
135	Metabolic cost underlies task-dependent variations in motor unit recruitment. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	6
134	Animal Locomotion: Near-Ground Low-Cost Flights. <i>Current Biology</i> , <b>2018</b> , 28, R1348-R1349	6.3	1
133	Comparison of human gastrocnemius forces predicted by Hill-type muscle models and estimated from ultrasound images. <i>Journal of Experimental Biology</i> , <b>2017</b> , 220, 1643-1653	3	40
132	High-speed surface reconstruction of a flying bird using structured light. <i>Journal of Experimental Biology</i> , <b>2017</b> , 220, 1956-1961	3	18
131	Rules to fly by: pigeons navigating horizontal obstacles limit steering by selecting gaps most aligned to their flight direction. <i>Interface Focus</i> , <b>2017</b> , 7, 20160093	3.9	13
130	Scaling of the ankle extensor muscle-tendon units and the biomechanical implications for bipedal hopping locomotion in the post-pouch kangaroo <i>Macropus fuliginosus</i> . <i>Journal of Anatomy</i> , <b>2017</b> , 231, 921-930	2.9	11
129	Vertical leaping mechanics of the Lesser Egyptian Jerboa reveal specialization for maneuverability rather than elastic energy storage. <i>Frontiers in Zoology</i> , <b>2017</b> , 14, 32	2.8	13
128	Biomechanics and neural control of movement, 20 years later: what have we learned and what has changed?. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2017</b> , 14, 91	5.3	10
127	Mechanics of evolutionary digit reduction in fossil horses (Equidae). <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2017</b> , 284,	4.4	22
126	Unpredictability of escape trajectory explains predator evasion ability and microhabitat preference of desert rodents. <i>Nature Communications</i> , <b>2017</b> , 8, 440	17.4	36
125	Experimental determination of three-dimensional cervical joint mobility in the avian neck. <i>Frontiers in Zoology</i> , <b>2017</b> , 14, 37	2.8	17
124	Pigeons () Follow Their Head during Turning Flight: Head Stabilization Underlies the Visual Control of Flight. <i>Frontiers in Neuroscience</i> , <b>2017</b> , 11, 655	5.1	7
123	Foraging at the edge of the world: low-altitude, high-speed manoeuvring in barn swallows. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2016</b> , 371,	5.8	15
122	Optic flow stabilizes flight in ruby-throated hummingbirds. <i>Journal of Experimental Biology</i> , <b>2016</b> , 219, 2443-8	3	16
121	Locomotion as an emergent property of muscle contractile dynamics. <i>Journal of Experimental Biology</i> , <b>2016</b> , 219, 285-94	3	38

120	R. McNeill Alexander (1934-2016). <i>Nature</i> , <b>2016</b> , 532, 442	50.4	
119	Pigeons trade efficiency for stability in response to level of challenge during confined flight. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 3392-6	11.5	22
118	The capacity of the human iliotibial band to store elastic energy during running. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 3341-8	2.9	14
117	Outrun or Outmaneuver: Predator-Prey Interactions as a Model System for Integrating Biomechanical Studies in a Broader Ecological and Evolutionary Context. <i>Integrative and Comparative Biology</i> , <b>2015</b> , 55, 1188-97	2.8	50
116	Western and Clark's grebes use novel strategies for running on water. <i>Journal of Experimental Biology</i> , <b>2015</b> , 218, 1235-43	3	19
115	The human iliotibial band is specialized for elastic energy storage compared with the chimp fascia lata. <i>Journal of Experimental Biology</i> , <b>2015</b> , 218, 2382-93	3	6
114	Multiple phylogenetically distinct events shaped the evolution of limb skeletal morphologies associated with bipedalism in the jerboas. <i>Current Biology</i> , <b>2015</b> , 25, 2785-2794	6.3	33
113	Hummingbird flight stability and control in freestream turbulent winds. <i>Journal of Experimental Biology</i> , <b>2015</b> , 218, 1444-52	3	33
112	Pigeons produce aerodynamic torques through changes in wing trajectory during low speed aerial turns. <i>Journal of Experimental Biology</i> , <b>2015</b> , 218, 480-90	3	14
111	Scaling of the spring in the leg during bouncing gaits of mammals. <i>Integrative and Comparative Biology</i> , <b>2014</b> , 54, 1099-108	2.8	11
110	Directional differences in the biaxial material properties of fascia lata and the implications for fascia function. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 1224-37	4.7	25
109	Through the eyes of a bird: modelling visually guided obstacle flight. <i>Journal of the Royal Society Interface</i> , <b>2014</b> , 11, 20140239	4.1	36
108	A constitutive description of the anisotropic response of the fascia lata. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2014</b> , 30, 306-23	4.1	20
107	Flying between obstacles with an autonomous knife-edge maneuver <b>2014</b> ,		10
106	Validation of Hill-type muscle models in relation to neuromuscular recruitment and force-velocity properties: predicting patterns of in vivo muscle force. <i>Integrative and Comparative Biology</i> , <b>2014</b> , 54, 1072-83	2.8	27
105	The effect of fast and slow motor unit activation on whole-muscle mechanical performance: the size principle may not pose a mechanical paradox. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2014</b> , 281, 20140002	4.4	29
104	Accuracy of gastrocnemius muscles forces in walking and running goats predicted by one-element and two-element Hill-type models. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 2288-95	2.9	29
103	Modulation of joint moments and work in the goat hindlimb with locomotor speed and surface grade. <i>Journal of Experimental Biology</i> , <b>2013</b> , 216, 2201-12	3	19

102	Recruitment of faster motor units is associated with greater rates of fascicle strain and rapid changes in muscle force during locomotion. <i>Journal of Experimental Biology</i> , <b>2013</b> , 216, 198-207	3	19
101	Hummingbird flight. <i>Current Biology</i> , <b>2012</b> , 22, R472-7	6.3	25
100	Muscle function during takeoff and landing flight in the pigeon ( <i>Columba livia</i> ). <i>Journal of Experimental Biology</i> , <b>2012</b> , 215, 4104-14	3	25
99	A muscle's force depends on the recruitment patterns of its fibers. <i>Annals of Biomedical Engineering</i> , <b>2012</b> , 40, 1708-20	4.7	42
98	Morphological and kinematic basis of the hummingbird flight stroke: scaling of flight muscle transmission ratio. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2012</b> , 279, 1986-92	4.4	41
97	EMG analysis tuned for determining the timing and level of activation in different motor units. <i>Journal of Electromyography and Kinesiology</i> , <b>2011</b> , 21, 557-65	2.5	24
96	Mechanics, modulation and modelling: how muscles actuate and control movement. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1463-5	5.8	8
95	Functional and architectural complexity within and between muscles: regional variation and intermuscular force transmission. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1477-87	5.8	28
94	Leg muscles that mediate stability: mechanics and control of two distal extensor muscles during obstacle negotiation in the guinea fowl. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1580-91	5.8	54
93	A collisional perspective on quadrupedal gait dynamics. <i>Journal of the Royal Society Interface</i> , <b>2011</b> , 8, 1480-6	4.1	44
92	There is always a trade-off between speed and force in a lever system: comment on McHenry (2010). <i>Biology Letters</i> , <b>2011</b> , 7, 878-9; discussion 880-1	3.6	11
91	Muscle function in avian flight: achieving power and control. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1496-506	5.8	57
90	BigDog-inspired studies in the locomotion of goats and dogs. <i>Integrative and Comparative Biology</i> , <b>2011</b> , 51, 190-202	2.8	26
89	Pigeons steer like helicopters and generate down- and upstroke lift during low speed turns. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 19990-5	11.5	53
88	A moving topic: control and dynamics of animal locomotion. <i>Biology Letters</i> , <b>2010</b> , 6, 387-8	3.6	9
87	Wing and body kinematics of takeoff and landing flight in the pigeon ( <i>Columba livia</i> ). <i>Journal of Experimental Biology</i> , <b>2010</b> , 213, 1651-8	3	64
86	Effects of flight speed upon muscle activity in hummingbirds. <i>Journal of Experimental Biology</i> , <b>2010</b> , 213, 2515-23	3	28
85	Dynamics of goat distal hind limb muscle-tendon function in response to locomotor grade. <i>Journal of Experimental Biology</i> , <b>2009</b> , 212, 2092-104	3	33

84	Mono- versus biarticular muscle function in relation to speed and gait changes: in vivo analysis of the goat triceps brachii. <i>Journal of Experimental Biology</i> , <b>2009</b> , 212, 3349-60	3	11
83	Fatigue alters in vivo function within and between limb muscles during locomotion. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2009</b> , 276, 1193-7	4-4	9
82	The role of intrinsic muscle mechanics in the neuromuscular control of stable running in the guinea fowl. <i>Journal of Physiology</i> , <b>2009</b> , 587, 2693-707	3-9	61
81	Hind limb scaling of kangaroos and wallabies (superfamily Macropodoidea): implications for hopping performance, safety factor and elastic savings. <i>Journal of Anatomy</i> , <b>2008</b> , 212, 153-63	2-9	52
80	Functional diversification within and between muscle synergists during locomotion. <i>Biology Letters</i> , <b>2008</b> , 4, 41-4	3-6	60
79	Kinematics and power requirements of ascending and descending flight in the pigeon ( <i>Columba livia</i> ). <i>Journal of Experimental Biology</i> , <b>2008</b> , 211, 1120-30	3	34
78	Contractile properties of the pigeon supracoracoideus during different modes of flight. <i>Journal of Experimental Biology</i> , <b>2008</b> , 211, 170-9	3	47
77	Integration within and between muscles during terrestrial locomotion: effects of incline and speed. <i>Journal of Experimental Biology</i> , <b>2008</b> , 211, 2303-16	3	34
76	Variability in forelimb bone strains during non-steady locomotor activities in goats. <i>Journal of Experimental Biology</i> , <b>2008</b> , 211, 1148-62	3	16
75	Compliance, actuation, and work characteristics of the goat foreleg and hindleg during level, uphill, and downhill running. <i>Journal of Applied Physiology</i> , <b>2008</b> , 104, 130-41	3-7	37
74	Differential muscle function between muscle synergists: long and lateral heads of the triceps in jumping and landing goats ( <i>Capra hircus</i> ). <i>Journal of Applied Physiology</i> , <b>2008</b> , 105, 1262-73	3-7	14
73	Skeletal strain patterns and growth in the emu hindlimb during ontogeny. <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 2676-90	3	69
72	Neuromechanics: an integrative approach for understanding motor control. <i>Integrative and Comparative Biology</i> , <b>2007</b> , 47, 16-54	2-8	164
71	Unsteady locomotion: integrating muscle function with whole body dynamics and neuromuscular control. <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 2949-60	3	123
70	Low speed maneuvering flight of the rose-breasted cockatoo ( <i>Eolophus roseicapillus</i> ). II. Inertial and aerodynamic reorientation. <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 1912-24	3	37
69	Low speed maneuvering flight of the rose-breasted cockatoo ( <i>Eolophus roseicapillus</i> ). I. Kinematic and neuromuscular control of turning. <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 1897-911	3	59
68	Modulation of in vivo muscle power output during swimming in the African clawed frog ( <i>Xenopus laevis</i> ). <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 3147-59	3	29
67	Three-dimensional kinematics of hummingbird flight. <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 2368-83		154

66	Modulation of proximal muscle function during level versus incline hopping in tammar wallabies ( <i>Macropus eugenii</i> ). <i>Journal of Experimental Biology</i> , <b>2007</b> , 210, 1255-65	3	22
65	Experimental Study of Low Speed Turning Flight in Cockatoos and Cockatiels <b>2007</b> ,		11
64	Patterns of mechanical energy change in tetrapod gait: pendula, springs and work. <i>Journal of Experimental Zoology Part A, Comparative Experimental Biology</i> , <b>2006</b> , 305, 899-911		65
63	Running over rough terrain: guinea fowl maintain dynamic stability despite a large unexpected change in substrate height. <i>Journal of Experimental Biology</i> , <b>2006</b> , 209, 171-87	3	113
62	Running over rough terrain reveals limb control for intrinsic stability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 15681-6	11.5	152
61	In vivo bone strain and ontogenetic growth patterns in relation to life-history strategies and performance in two vertebrate taxa: goats and emu. <i>Physiological and Biochemical Zoology</i> , <b>2006</b> , 79, 57-72	2	21
60	Tired of fatigue? Factors affecting the force-length relationship of muscle. <i>Journal of Applied Physiology</i> , <b>2006</b> , 101, 5-6	3.7	1
59	Effects of load carrying on metabolic cost and hindlimb muscle dynamics in guinea fowl ( <i>Numida meleagris</i> ). <i>Journal of Applied Physiology</i> , <b>2006</b> , 101, 1060-9	3.7	29
58	Negotiating obstacles: running kinematics of the lizard <i>Sceloporus malachiticus</i> . <i>Journal of Zoology</i> , <b>2006</b> , 270, 359-371	2	55
57	In vivo muscle function vs speed. I. Muscle strain in relation to length change of the muscle-tendon unit. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 1175-90	3	31
56	In vivo muscle function vs speed. II. Muscle function trotting up an incline. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 1191-200	3	33
55	The mechanics of jumping versus steady hopping in yellow-footed rock wallabies. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 2741-51	3	34
54	Regional patterns of pectoralis fascicle strain in the pigeon <i>Columba livia</i> during level flight. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 771-86	3	34
53	Joint work and power associated with acceleration and deceleration in tammar wallabies ( <i>Macropus eugenii</i> ). <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 41-53	3	44
52	Patterns of strain and activation in the thigh muscles of goats across gaits during level locomotion. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 4599-611	3	45
51	Biomechanical consequences of scaling. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 1665-76	3	236
50	Dynamic pressure maps for wings and tails of pigeons in slow, flapping flight, and their energetic implications. <i>Journal of Experimental Biology</i> , <b>2005</b> , 208, 355-69	3	58
49	Wing inertia and whole-body acceleration: an analysis of instantaneous aerodynamic force production in cockatiels ( <i>Nymphicus hollandicus</i> ) flying across a range of speeds. <i>Journal of Experimental Biology</i> , <b>2004</b> , 207, 1689-702	3	88



48	Dynamics of leg muscle function in tammar wallabies ( <i>M. eugenii</i> ) during level versus incline hopping. <i>Journal of Experimental Biology</i> , <b>2004</b> , 207, 211-23	3	63
47	Walking and running in the red-legged running frog, <i>Kassina maculata</i> . <i>Journal of Experimental Biology</i> , <b>2004</b> , 207, 399-410	3	91
46	Ontogenetic patterns of limb loading, in vivo bone strains and growth in the goat radius. <i>Journal of Experimental Biology</i> , <b>2004</b> , 207, 2577-88	3	66
45	Muscle mechanical advantage of human walking and running: implications for energy cost. <i>Journal of Applied Physiology</i> , <b>2004</b> , 97, 2266-74	3.7	192
44	How cockatiels ( <i>Nymphicus hollandicus</i> ) modulate pectoralis power output across flight speeds. <i>Journal of Experimental Biology</i> , <b>2003</b> , 206, 1363-78	3	68
43	Wing kinematics of avian flight across speeds. <i>Journal of Avian Biology</i> , <b>2003</b> , 34, 177-184	1.9	54
42	Comparative power curves in bird flight. <i>Nature</i> , <b>2003</b> , 421, 363-6	50.4	174
41	In vivo and in vitro heterogeneity of segment length changes in the semimembranosus muscle of the toad. <i>Journal of Physiology</i> , <b>2003</b> , 549, 877-88	3.9	69
40	Muscle force-length dynamics during level versus incline locomotion: a comparison of in vivo performance of two guinea fowl ankle extensors. <i>Journal of Experimental Biology</i> , <b>2003</b> , 206, 2941-58	3	152
39	The aerodynamics of avian take-off from direct pressure measurements in Canada geese ( <i>Branta canadensis</i> ). <i>Journal of Experimental Biology</i> , <b>2003</b> , 206, 4051-6	3	34
38	Effects of surface grade on proximal hindlimb muscle strain and activation during rat locomotion. <i>Journal of Applied Physiology</i> , <b>2002</b> , 93, 1731-43	3.7	67
37	Future directions for the analysis of musculoskeletal design and locomotor performance. <i>Journal of Morphology</i> , <b>2002</b> , 252, 38-51	1.6	37
36	Energetics and mechanics of human running on surfaces of different stiffnesses. <i>Journal of Applied Physiology</i> , <b>2002</b> , 92, 469-78	3.7	250
35	Estimates of circulation and gait change based on a three-dimensional kinematic analysis of flight in cockatiels ( <i>Nymphicus hollandicus</i> ) and ringed turtle-doves ( <i>Streptopelia risoria</i> ). <i>Journal of Experimental Biology</i> , <b>2002</b> , 205, 1389-1409	3	93
34	Estimates of circulation and gait change based on a three-dimensional kinematic analysis of flight in cockatiels ( <i>Nymphicus hollandicus</i> ) and ringed turtle-doves ( <i>Streptopelia risoria</i> ). <i>Journal of Experimental Biology</i> , <b>2002</b> , 205, 1389-409	3	52
33	Hindlimb muscle function in relation to speed and gait: in vivo patterns of strain and activation in a hip and knee extensor of the rat ( <i>Rattus norvegicus</i> ). <i>Journal of Experimental Biology</i> , <b>2001</b> , 204, 2717-2731	3	131
32	Exercise and reduced muscle mass in starlings. <i>Nature</i> , <b>2000</b> , 406, 585-6	50.4	27
31	Experimental alteration of limb posture in the chicken ( <i>Gallus gallus</i> ) and its bearing on the use of birds as analogs for dinosaur locomotion. <i>Journal of Morphology</i> , <b>1999</b> , 240, 237-49	1.6	63



30	Experimental alteration of limb posture in the chicken ( <i>Gallus gallus</i> ) and its bearing on the use of birds as analogs for dinosaur locomotion <b>1999</b> , 240, 237		2
29	Experimental alteration of limb posture in the chicken ( <i>Gallus gallus</i> ) and its bearing on the use of birds as analogs for dinosaur locomotion <b>1999</b> , 240, 237		1
28	Young wallabies get a free ride. <i>Nature</i> , <b>1998</b> , 395, 653-654	50.4	23
27	Evaluation of a bone's in vivo 24-hour loading history for physical exercise compared with background loading. <i>Journal of Orthopaedic Research</i> , <b>1998</b> , 16, 29-37	3.8	18
26	Muscle-tendon stresses and elastic energy storage during locomotion in the horse. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , <b>1998</b> , 120, 73-87	2.3	182
25	Muscle Function in vivo: A Comparison of Muscles used for Elastic Energy Savings versus Muscles Used to Generate Mechanical Power <sup>1</sup> . <i>American Zoologist</i> , <b>1998</b> , 38, 703-717		120
24	Asymmetrical Force Production in the Maneuvering Flight of Pigeons. <i>Auk</i> , <b>1998</b> , 115, 916-928	2.1	33
23	Effects of Elastic Energy Storage on Muscle Work and Efficiency. <i>Journal of Applied Biomechanics</i> , <b>1997</b> , 13, 422-426	1.2	6
22	Mechanical power output of bird flight. <i>Nature</i> , <b>1997</b> , 390, 67-70	50.4	112
21	Adaptive changes in trabecular architecture in relation to functional strain patterns and disuse. <i>Bone</i> , <b>1996</b> , 19, 1-8	4.7	298
20	In vivo strain in the humerus of pigeons ( <i>Columba livia</i> ) during flight. <i>Journal of Morphology</i> , <b>1995</b> , 225, 61-75	1.6	96
19	Structural response of growing bone to exercise and disuse. <i>Journal of Applied Physiology</i> , <b>1994</b> , 76, 946-955	3.7	118
18	Safety factors in bone strength. <i>Calcified Tissue International</i> , <b>1993</b> , 53 Suppl 1, S68-74	3.9	116
17	Allometry and curvature in the long bones of quadrupedal mammals. <i>Journal of Zoology</i> , <b>1992</b> , 226, 455-467		54
16	The functional morphology of xenarthrous vertebrae in the armadillo <i>Dasypus novemcinctus</i> (Mammalia, Xenarthra). <i>Journal of Morphology</i> , <b>1992</b> , 214, 63-81	1.6	32
15	Kinematic and Electromyographic Analysis of the functional role of the body axis during Terrestrial and Aquatic Locomotion in the Salamander <i>Ambystoma Tigrinum</i> . <i>Journal of Experimental Biology</i> , <b>1992</b> , 162, 107-130	3	111
14	PECTORALIS MUSCLE FORCE AND POWER OUTPUT DURING FLIGHT IN THE STARLING. <i>Journal of Experimental Biology</i> , <b>1992</b> , 164, 1-18	3	56
13	Musculoskeletal design in relation to body size. <i>Journal of Biomechanics</i> , <b>1991</b> , 24 Suppl 1, 19-29	2.9	158

12	Bipedal locomotion: effects of speed, size and limb posture in birds and humans. <i>Journal of Zoology</i> , <b>1991</b> , 224, 127-147	2	324
11	Differential scaling of the long bones in the terrestrial carnivora and other mammals. <i>Journal of Morphology</i> , <b>1990</b> , 204, 157-69	1.6	161
10	Biomechanics of mammalian terrestrial locomotion. <i>Science</i> , <b>1990</b> , 250, 1097-103	33.3	417
9	Scaling body support in mammals: limb posture and muscle mechanics. <i>Science</i> , <b>1989</b> , 245, 45-8	33.3	620
8	Mammalian Terrestrial Locomotion and Size. <i>BioScience</i> , <b>1989</b> , 39, 776-783	5.7	100
7	Telemetered in vivo strain analysis of locomotor mechanics of brachiating gibbons. <i>Nature</i> , <b>1989</b> , 342, 270-2	50.4	96
6	Bone curvature: sacrificing strength for load predictability?. <i>Journal of Theoretical Biology</i> , <b>1988</b> , 131, 75-92	2.3	190
5	Mechanics of locomotion and jumping in the horse (Equus): in vivo stress in the tibia and metatarsus. <i>Journal of Zoology</i> , <b>1988</b> , 214, 547-565	2	76
4	Bone modeling during growth: dynamic strain equilibrium in the chick tibiotarsus. <i>Calcified Tissue International</i> , <b>1986</b> , 39, 390-5	3.9	141
3	Regulation of respiratory airflow during panting and feeding in the dog. <i>Respiration Physiology</i> , <b>1985</b> , 61, 185-95		22
2	Bone stress in the horse forelimb during locomotion at different gaits: a comparison of two experimental methods. <i>Journal of Biomechanics</i> , <b>1983</b> , 16, 565-76	2.9	203
1	The mechanics of horse locomotion: Strains developed in the limb bones at different gaits. <i>Journal of Biomechanics</i> , <b>1981</b> , 14, 487	2.9	2