R Meldrum Robertson

List of Publications by Year
in descending order

121 papers	4,105 citations	109321 35 h-index	155660 55 g-index
134 all docs	134 docs citations	134 times ranked	2129 citing authors

#	Article	IF	Citations
1	Rapid cold hardening delays the onset of anoxia-induced coma via an octopaminergic pathway in Locusta migratoria. Journal of Insect Physiology, 2022, 137, 104360.	2.0	6
2	The Critical Role of Spreading Depolarizations in Early Brain Injury: Consensus and Contention. Neurocritical Care, 2022, 37, 83-101.	2.4	36
3	Questioning Glutamate Excitotoxicity in Acute Brain Damage: The Importance of Spreading Depolarization. Neurocritical Care, 2022, 37, 11-30.	2.4	18
4	Knockdown of a Cyclic Nucleotide-Gated Ion Channel Impairs Locomotor Activity and Recovery From Hypoxia in Adult Drosophila melanogaster. Frontiers in Physiology, 2022, 13, 852919.	2.8	0
5	Rapid cold hardening increases axonal Na+/K+-ATPase activity and enhances performance of a visual motion detection circuit in <i>Locusta migratoria</i>. Journal of Experimental Biology, 2022, 225, .	1.7	6
6	Measuring enzyme activities in crude homogenates: Na+/K+-ATPase as a case study in optimizing assays. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2021, 255, 110577.	1.6	9
7	Motor patterning, ion regulation and spreading depolarization during CNS shutdown induced by experimental anoxia in Locusta migratoria. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2021, 260, 111022.	1.8	10
8	Which Spreading Depolarizations Are Deleterious To Brain Tissue?. Neurocritical Care, 2020, 32, 317-322.	2.4	40
9	Inhibition of ATP-sensitive potassium channels exacerbates anoxic coma in<i>Locusta migratoria</i>. Journal of Neurophysiology, 2020, 124, 1754-1765.	1.8	9
10	Effects of brief chilling and desiccation on ion homeostasis in the central nervous system of the migratory locust, Locusta migratoria. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2020, 249, 110774.	1.8	8
11	Neural dysfunction correlates with heat coma and CTmax in <i>Drosophila</i> but does not set the boundaries for heat stress survival. Journal of Experimental Biology, 2020, 223, .	1.7	22
12	Neural shutdown under stress: an evolutionary perspective on spreading depolarization. Journal of Neurophysiology, 2020, 123, 885-895.	1.8	33
13	Role of adenosine in functional recovery following anoxic coma in Locusta migratoria. Journal of Insect Physiology, 2020, 124, 104057.	2.0	7
14	Neural control of flight in locusts. , 2020, , 75-95.		0
15	Experimental evolution of response to anoxia in <i>Drosophila</i>: recovery of locomotion following CO2 or N2 exposure. Journal of Experimental Biology, 2019, 222, .	1.7	4
16	Rapid cold hardening and octopamine modulate chill tolerance in Locusta migratoria. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2019, 234, 28-35.	1.8	14
17	Expression of Heat Shock Protein 70 Is Insufficient To Extend<i>Drosophila melanogaster</i>Longevity. G3: Genes, Genomes, Genetics, 2019, 9, 4197-4207.	1.8	8
18	Anoxia tolerance of the adult Australian Plague Locust (Chortoicetes terminifera). Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2019, 229, 81-92.	1.8	7

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19	Persistent One-Way Walking in a Circular Arena in Drosophila melanogaster Canton-S Strain. Behavior Genetics, 2018, 48, 80-93.	2.1	13
20	Central nervous shutdown underlies acute cold tolerance in tropical and temperate<i>Drosophila</i>species. Journal of Experimental Biology, 2018, 221, .	1.7	46
21	Different age-dependent performance in Drosophila wild-type Canton-S and the white mutant w1118 flies. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2017, 206, 17-23.	1.8	23
22	Food deprivation and prior anoxic coma have opposite effects on the activity of a visual interneuron in the locust. Journal of Insect Physiology, 2017, 98, 336-346.	2.0	2
23	The origin of the â€˜channel arrestâ€™ hypothesis. Journal of Experimental Biology, 2017, 220, 1747-1748.	1.7	7
24	AMP-activated protein kinase protects against anoxia in Drosophila melanogaster. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2017, 214, 30-39.	1.8	7
25	The white gene controls copulation success in Drosophila melanogaster. Scientific Reports, 2017, 7, 7712.	3.3	40
26	Chill coma in the locust, Locusta migratoria, is initiated by spreading depolarization in the central nervous system. Scientific Reports, 2017, 7, 10297.	3.3	58
27	A new direction for spreading depolarization: Investigation in the fly brain. Channels, 2017, 11, 97-98.	2.8	15
28	White - cGMP Interaction Promotes Fast Locomotor Recovery from Anoxia in Adult Drosophila. PLoS ONE, 2017, 12, e0168361.	2.5	16
29	Octopamine stabilizes conduction reliability of an unmyelinated axon during hypoxic stress. Journal of Neurophysiology, 2016, 116, 949-959.	1.8	10
30	Ionic mechanisms maintaining action potential conduction velocity at high firing frequencies in an unmyelinated axon. Physiological Reports, 2016, 4, e12814.	1.7	10
31	Spreading depolarization in the brain of <i>Drosophila</i> is induced by inhibition of the Na⁺/K⁺-ATPase and mitigated by a decrease in activity of protein kinase G. Journal of Neurophysiology, 2016, 116, 1152-1160.	1.8	27
32	Timing of Locomotor Recovery from Anoxia Modulated by the <i>white</i> Gene in <i>Drosophila</i>. Genetics, 2016, 203, 787-797.	2.9	36
33	Mechanisms of spreading depolarization in vertebrate and insect central nervous systems. Journal of Neurophysiology, 2016, 116, 1117-1127.	1.8	48
34	Activity-dependence of spreading depression in the locust CNS. Journal of Experimental Biology, 2016, 219, 626-30.	1.7	10
35	Pulsed Light Stimulation Increases Boundary Preference and Periodicity of Episodic Motor Activity in Drosophila melanogaster. PLoS ONE, 2016, 11, e0163976.	2.5	11
36	Locomotion Induced by Spatial Restriction in Adult Drosophila. PLoS ONE, 2015, 10, e0135825.	2.5	30

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37	Cell swelling increases the severity of spreading depression in<i>Locusta migratoria</i>. Journal of Neurophysiology, 2015, 114, 3111-3120.	1.8	14
38	Functional characterisation of the chromatically antagonistic photosensitive mechanism of erythrophores in the tilapia <i>Oreochromis niloticus</i>. Journal of Experimental Biology, 2015, 218, 748-756.	1.7	11
39	Reduction in Neural Performance following Recovery from Anoxic Stress Is Mimicked by AMPK Pathway Activation. PLoS ONE, 2014, 9, e88570.	2.5	15
40	Disruption of the bloodâ€“brain barrier exacerbates spreading depression in the locust CNS. Journal of Insect Physiology, 2014, 66, 1-9.	2.0	14
41	Na⁺-K⁺-ATPase trafficking induced by heat shock pretreatment correlates with increased resistance to anoxia in locusts. Journal of Neurophysiology, 2014, 112, 814-823.	1.8	27
42	The influence of chromatic background on the photosensitivity of tilapia erythrophores. Biology Open, 2014, 3, 117-120.	1.2	8
43	Ontogeny of melanophore photosensitivity in rainbow trout (Oncorhynchus mykiss). Biology Open, 2014, 3, 1032-1036.	1.2	7
44	Pharmacological blockade of gap junctions induces repetitive surging of extracellular potassium within the locust CNS. Journal of Insect Physiology, 2013, 59, 1031-1040.	2.0	18
45	Modulation of environmental light alters reception and production of visual signals in Nile tilapia. Journal of Experimental Biology, 2013, 216, 3110-22.	1.7	24
46	Possible Involvement of Cone Opsins in Distinct Photoresponses of Intrinsically Photosensitive Dermal Chromatophores in Tilapia Oreochromis niloticus. PLoS ONE, 2013, 8, e70342.	2.5	19
47	Protective effect of hypothermia on brain potassium homeostasis during repetitive anoxia in Drosophila melanogaster. Journal of Experimental Biology, 2012, 215, 4157-65.	1.7	21
48	Temperature and neuronal circuit function: compensation, tuning and tolerance. Current Opinion in Neurobiology, 2012, 22, 724-734.	4.2	105
49	Cold hardening modulates K+ homeostasis in the brain of Drosophila melanogaster during chill coma. Journal of Insect Physiology, 2012, 58, 1511-1516.	2.0	65
50	Glial Hsp70 Protects K+ Homeostasis in the Drosophila Brain during Repetitive Anoxic Depolarization. PLoS ONE, 2011, 6, e28994.	2.5	38
51	Protein expression following heat shock in the nervous system of Locusta migratoria. Journal of Insect Physiology, 2011, 57, 1480-1488.	2.0	13
52	Metabolic Stress Modulates Motor Patterning via AMP-Activated Protein Kinase. Journal of Neuroscience, 2011, 31, 3207-3216.	3.6	22
53	Long-lasting effects of chemical hypoxia on spinal cord function in tadpoles. NeuroReport, 2010, 21, 943-947.	1.2	5
54	A pair of motion-sensitive neurons in the locust encode approaches of a looming object. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 927-938.	1.6	46

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55	Coma in response to environmental stress in the locust: A model for cortical spreading depression. Journal of Insect Physiology, 2010, 56, 980-990.	2.0	89
56	Inhibition of protein kinase G activity protects neonatal mouse respiratory network from hyperthermic and hypoxic stress. Brain Research, 2010, 1311, 64-72.	2.2	20
57	Loss of Potassium Homeostasis Underlies Hyperthermic Conduction Failure in Control and Preconditioned Locusts. Journal of Neurophysiology, 2009, 102, 285-293.	1.8	24
58	The Nitric Oxide/cGMP Pathway Tunes the Thermosensitivity of Swimming Motor Patterns in<i>Xenopus laevis</i>Tadpoles. Journal of Neuroscience, 2009, 29, 13945-13951.	3.6	13
59	Suppression of Spreading Depression-Like Events in Locusts by Inhibition of the NO/cGMP/PKG Pathway. Journal of Neuroscience, 2009, 29, 8225-8235.	3.6	51
60	Role of ATP-Dependent Calcium Regulation in Modulation of <i>Drosophila</i> Synaptic Thermotolerance. Journal of Neurophysiology, 2009, 102, 901-913.	1.8	19
61	Thermal activation of escape swimming in post-hatching <i>Xenopus laevis</i> frog larvae. Journal of Experimental Biology, 2009, 212, 2356-2364.	1.7	37
62	K+ homeostasis and central pattern generation in the metathoracic ganglion of the locust. Journal of Insect Physiology, 2009, 55, 599-607.	2.0	24
63	Tissue-specific targeting of Hsp26 has no effect on heat resistance of neural function in larval Drosophila. Cell Stress and Chaperones, 2008, 13, 85-95.	2.9	3
64	Hyperthermic Preconditioning of Presynaptic Calcium Regulation in<i>Drosophila</i>. Journal of Neurophysiology, 2008, 99, 2420-2430.	1.8	26
65	Stress Preconditioning of Spreading Depression in the Locust CNS. PLoS ONE, 2007, 2, e1366.	2.5	81
66	Targeting HSP70 to motoneurons protects locomotor activity from hyperthermia inDrosophila. Developmental Neurobiology, 2007, 67, 438-455.	3.0	48
67	Cytoskeletal stability and heat shock-mediated thermoprotection of central pattern generation in Locusta migratoria. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2007, 147, 344-348.	1.8	11
68	Natural Variation in the Thermotolerance of Neural Function and Behavior due to a cGMP-Dependent Protein Kinase. PLoS ONE, 2007, 2, e773.	2.5	54
69	Photoperiod-induced plasticity of thermosensitivity and acquired thermotolerance in Locusta migratoria. Journal of Experimental Biology, 2006, 209, 4690-4700.	1.7	7
70	A role for octopamine in coordinating thermoprotection of an insect nervous system. Journal of Thermal Biology, 2006, 31, 149-158.	2.5	36
71	Temperature-sensitive gating in a descending visual interneuron, DCMD. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2006, 192, 915-925.	1.6	7
72	Octopamine Mediates Thermal Preconditioning of the Locust Ventilatory Central Pattern Generator via a cAMP/Protein Kinase A Signaling Pathway. Journal of Neuroscience, 2006, 26, 12118-12126.	3.6	36

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73	Cold hardening and transcriptional change in Drosophila melanogaster. Insect Molecular Biology, 2005, 14, 607-613.	2.0	164
74	Synaptic thermoprotection in a desert-dwellingDrosophila species. Journal of Neurobiology, 2005, 64, 170-180.	3.6	9
75	Heat Shockâ€"Mediated Thermoprotection of Larval Locomotion Compromised by Ubiquitous Overexpression of Hsp70 in Drosophila melanogaster. Journal of Neurophysiology, 2005, 94, 3563-3572.	1.8	39
76	Heat Stressâ€"Mediated Plasticity in a Locust Looming-Sensitive Visual Interneuron. Journal of Neurophysiology, 2005, 93, 1908-1919.	1.8	32
77	The Multiple Functions of Cysteine-String Protein Analyzed at Drosophila Nerve Terminals. Journal of Neuroscience, 2005, 25, 2204-2214.	3.6	51
78	Modulation of Neural Circuit Operation by Prior Environmental Stress. Integrative and Comparative Biology, 2004, 44, 21-27.	2.0	39
79	Stress-Induced Thermoprotection of Neuromuscular Transmission. Integrative and Comparative Biology, 2004, 44, 14-20.	2.0	46
80	Auditory-evoked evasive manoeuvres in free-flying locusts and moths. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2004, 190, 69-84.	1.6	24
81	Acoustic startle/escape reactions in tethered flying locusts: motor patterns and wing kinematics underlying intentional steering. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2004, 190, 581-600.	1.6	6
82	A role for the cytoskeleton in heat-shock-mediated thermoprotection of locust neuromuscular junctions. Journal of Neurobiology, 2004, 60, 453-462.	3.6	14
83	Thermal stress and neural function: adaptive mechanisms in insect model systems. Journal of Thermal Biology, 2004, 29, 351-358.	2.5	80
84	Stress-induced thermotolerance of ventilatory motor pattern generation in the locust, Locusta migratoria. Journal of Insect Physiology, 2003, 49, 1039-1047.	2.0	28
85	Role for calcium in heat shock-mediated synaptic thermoprotection inDrosophila larvae. Journal of Neurobiology, 2003, 56, 360-371.	3.6	17
86	Cloning and characterization of a member of the hsp70 gene family from Locusta migratoria, a highly thermotolerant insect. Cell Stress and Chaperones, 2003, 8, 144.	2.9	62
87	Thermal Preconditioning and Heat-Shock Protein 72 Preserve Synaptic Transmission during Thermal Stress. Journal of Neuroscience, 2002, 22, RC193-RC193.	3.6	88
88	Impairment of central pattern generation in Drosophila cysteine string protein mutants. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2002, 188, 71-78.	1.6	41
89	Enhancement of presynaptic performance in transgenicDrosophila overexpressing heat shock protein Hsp70. Synapse, 2002, 44, 8-14.	1.2	53
90	Enhancement of Short-Term Synaptic Plasticity by Prior Environmental Stress. Journal of Neurophysiology, 2001, 85, 1332-1335.	1.8	13

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91	Activity of descending contralateral movement detector neurons and collision avoidance behaviour in response to head-on visual stimuli in locusts. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2001, 187, 115-129.	1.6	75
92	Heat shock-induced thermoprotection of action potentials in the locust flight system. Journal of Neurobiology, 2001, 49, 188-199.	3.6	27
93	Neuroprotection at<i>Drosophila</i>Synapses Conferred by Prior Heat Shock. Journal of Neuroscience, 1999, 19, 4360-4369.	3.6	104
94	Long-Term Effects of Prior Heat Shock on Neuronal Potassium Currents Recorded in a Novel Insect Ganglion Slice Preparation. Journal of Neurophysiology, 1999, 81, 795-802.	1.8	35
95	Free-Flight Ability in Locusts Recovering from Partial Deafferentation. Die Naturwissenschaften, 1998, 85, 167-170.	1.6	6
96	Heat shock protects synaptic transmission in flight motor circuitry of locusts. NeuroReport, 1998, 9, 2589-2593.	1.2	34
97	Neural parameters contributing to temperature compensation in the flight CPG of the locust,Locusta migratoria. Brain Research, 1996, 734, 213-222.	2.2	16
98	Structure of the forewing stretch receptor axon in immature and mature adult locusts. , 1996, 365, 268-277.		9
99	Exposure to heat shock affects thermosensitivity of the locust flight system. , 1996, 29, 367-383.		37
100	Effects of maturation on synaptic potentials in the locust flight system. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1994, 175, 437.	1.6	13
101	Effects of temperature on properties of flight neurons in the locust. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1994, 175, 193-202.	1.6	26
102	Retinal image size triggers obstacle avoidance in flying locusts. Die Naturwissenschaften, 1993, 80, 176-178.	1.6	47
103	Effects of temperature on synaptic potentials in the locust flight system. Journal of Neurophysiology, 1993, 70, 2197-2204.	1.8	21
104	Temperature Dependency of Wing-Beat Frequency in Intact and Deafferented Locusts. Journal of Experimental Biology, 1992, 162, 295-312.	1.7	18
105	WING MOVEMENTS ASSOCIATED WITH COLLISIONAVOIDANCE MANOEUVRES DURING FLIGHT IN THE LOCUST LOCUSTA MIGRATORIA. Journal of Experimental Biology, 1992, 163, 231-258.	1.7	39
106	A local circuit interaction in the flight system of the locust. Journal of Neuroscience, 1988, 8, 3929-3936.	3.6	19
107	Interneurons in the flight system of the cricketTeleogryllus oceanicus. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1987, 160, 431-445.	1.6	14
108	Structure predicts synaptic function of two classes of interneurons in the thoracic ganglia of Locusta migratoria. Cell and Tissue Research, 1987, 250, 105-114.	2.9	36

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109	Neuronal circuits controlling flight in the locust: central generation of the rhythm. Trends in Neurosciences, 1986, 9, 278-280.	8.6	45
110	Neuronal Circuits: An Evolutionary Perspective. Science, 1986, 233, 849-853.	12.6	169
111	Neural circuits in the flight system of the locust. Journal of Neurophysiology, 1985, 53, 110-128.	1.8	147
112	Oscillatory command input to the motor pattern generators of the crustacean stomatogastric ganglion. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1984, 154, 473-491.	1.6	18
113	Interneuronal organization in the flight system of the locust. Journal of Insect Physiology, 1984, 30, 95-101.	2.0	41
114	Interneurons in the flight system of the locust: Distribution, connections, and resetting properties. Journal of Comparative Neurology, 1983, 215, 33-50.	1.6	162
115	Phase-dependent influences of wing stretch receptors on flight rhythm in the locust. Journal of Neurophysiology, 1983, 49, 1168-1181.	1.8	120
116	Flight Interneurons in the Locust and the Origin of Insect Wings. Science, 1982, 217, 177-179.	12.6	115
117	Control of rhythmic behaviour by a hierarchy of linked oscillators in crustacea. Neuroscience Letters, 1981, 21, 111-116.	2.1	23
118	Oscillatory command input to the motor pattern generators of the crustacean stomatogastric ganglion. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1981, 143, 453-463.	1.6	37
119	Interneurons coactivating hindleg flexor and extensor motoneurons in the locust. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1981, 144, 391-400.	1.6	113
120	Firing between two spike thresholds: implications for oscillating lobster interneurons. Science, 1981, 214, 941-943.	12.6	9
121	Potential of Ulva lactuca for municipal wastewater bioremediation and fly food. , 0, 91, 23-30.		6