

R Meldrum Robertson

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3672544/publications.pdf>

Version: 2024-02-01

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	Neuronal Circuits: An Evolutionary Perspective. <i>Science</i> , 1986, 233, 849-853.	12.6	169
2	Cold hardening and transcriptional change in <i>Drosophila melanogaster</i> . <i>Insect Molecular Biology</i> , 2005, 14, 607-613.	2.0	164
3	Interneurons in the flight system of the locust: Distribution, connections, and resetting properties. <i>Journal of Comparative Neurology</i> , 1983, 215, 33-50.	1.6	162
4	Neural circuits in the flight system of the locust. <i>Journal of Neurophysiology</i> , 1985, 53, 110-128.	1.8	147
5	Phase-dependent influences of wing stretch receptors on flight rhythm in the locust. <i>Journal of Neurophysiology</i> , 1983, 49, 1168-1181.	1.8	120
6	Flight Interneurons in the Locust and the Origin of Insect Wings. <i>Science</i> , 1982, 217, 177-179.	12.6	115
7	Interneurons coactivating hindleg flexor and extensor motoneurons in the locust. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1981, 144, 391-400.	1.6	113
8	Temperature and neuronal circuit function: compensation, tuning and tolerance. <i>Current Opinion in Neurobiology</i> , 2012, 22, 724-734.	4.2	105
9	Neuroprotection at <i>Drosophila</i> Synapses Conferred by Prior Heat Shock. <i>Journal of Neuroscience</i> , 1999, 19, 4360-4369.	3.6	104
10	Coma in response to environmental stress in the locust: A model for cortical spreading depression. <i>Journal of Insect Physiology</i> , 2010, 56, 980-990.	2.0	89
11	Thermal Preconditioning and Heat-Shock Protein 72 Preserve Synaptic Transmission during Thermal Stress. <i>Journal of Neuroscience</i> , 2002, 22, RC193-RC193.	3.6	88
12	Stress Preconditioning of Spreading Depression in the Locust CNS. <i>PLoS ONE</i> , 2007, 2, e1366.	2.5	81
13	Thermal stress and neural function: adaptive mechanisms in insect model systems. <i>Journal of Thermal Biology</i> , 2004, 29, 351-358.	2.5	80
14	Activity of descending contralateral movement detector neurons and collision avoidance behaviour in response to head-on visual stimuli in locusts. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2001, 187, 115-129.	1.6	75
15	Cold hardening modulates K ⁺ homeostasis in the brain of <i>Drosophila melanogaster</i> during chill coma. <i>Journal of Insect Physiology</i> , 2012, 58, 1511-1516.	2.0	65
16	Cloning and characterization of a member of the hsp70 gene family from <i>Locusta migratoria</i> , a highly thermotolerant insect. <i>Cell Stress and Chaperones</i> , 2003, 8, 144.	2.9	62
17	Chill coma in the locust, <i>Locusta migratoria</i> , is initiated by spreading depolarization in the central nervous system. <i>Scientific Reports</i> , 2017, 7, 10297.	3.3	58
18	Natural Variation in the Thermotolerance of Neural Function and Behavior due to a cGMP-Dependent Protein Kinase. <i>PLoS ONE</i> , 2007, 2, e773.	2.5	54

#	ARTICLE	IF	CITATIONS
19	Enhancement of presynaptic performance in transgenic <i>Drosophila</i> overexpressing heat shock protein Hsp70. <i>Synapse</i> , 2002, 44, 8-14.	1.2	53
20	The Multiple Functions of Cysteine-String Protein Analyzed at <i>Drosophila</i> Nerve Terminals. <i>Journal of Neuroscience</i> , 2005, 25, 2204-2214.	3.6	51
21	Suppression of Spreading Depression-Like Events in Locusts by Inhibition of the NO/cGMP/PKG Pathway. <i>Journal of Neuroscience</i> , 2009, 29, 8225-8235.	3.6	51
22	Targeting HSP70 to motoneurons protects locomotor activity from hyperthermia in <i>Drosophila</i> . <i>Developmental Neurobiology</i> , 2007, 67, 438-455.	3.0	48
23	Mechanisms of spreading depolarization in vertebrate and insect central nervous systems. <i>Journal of Neurophysiology</i> , 2016, 116, 1117-1127.	1.8	48
24	Retinal image size triggers obstacle avoidance in flying locusts. <i>Die Naturwissenschaften</i> , 1993, 80, 176-178.	1.6	47
25	Stress-Induced Thermoprotection of Neuromuscular Transmission. <i>Integrative and Comparative Biology</i> , 2004, 44, 14-20.	2.0	46
26	A pair of motion-sensitive neurons in the locust encode approaches of a looming object. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2010, 196, 927-938.	1.6	46
27	Central nervous shutdown underlies acute cold tolerance in tropical and temperate <i>Drosophila</i> species. <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	46
28	Neuronal circuits controlling flight in the locust: central generation of the rhythm. <i>Trends in Neurosciences</i> , 1986, 9, 278-280.	8.6	45
29	Interneuronal organization in the flight system of the locust. <i>Journal of Insect Physiology</i> , 1984, 30, 95-101.	2.0	41
30	Impairment of central pattern generation in <i>Drosophila</i> cysteine string protein mutants. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2002, 188, 71-78.	1.6	41
31	The white gene controls copulation success in <i>Drosophila melanogaster</i> . <i>Scientific Reports</i> , 2017, 7, 7712.	3.3	40
32	Which Spreading Depolarizations Are Deleterious To Brain Tissue?. <i>Neurocritical Care</i> , 2020, 32, 317-322.	2.4	40
33	Modulation of Neural Circuit Operation by Prior Environmental Stress. <i>Integrative and Comparative Biology</i> , 2004, 44, 21-27.	2.0	39
34	Heat Shock-Mediated Thermoprotection of Larval Locomotion Compromised by Ubiquitous Overexpression of Hsp70 in <i>Drosophila melanogaster</i> . <i>Journal of Neurophysiology</i> , 2005, 94, 3563-3572.	1.8	39
35	WING MOVEMENTS ASSOCIATED WITH COLLISION AVOIDANCE MANOEUVRES DURING FLIGHT IN THE LOCUST <i>LOCUSTA MIGRATORIA</i> . <i>Journal of Experimental Biology</i> , 1992, 163, 231-258.	1.7	39
36	Glial Hsp70 Protects K ⁺ Homeostasis in the <i>Drosophila</i> Brain during Repetitive Anoxic Depolarization. <i>PLoS ONE</i> , 2011, 6, e28994.	2.5	38

#	ARTICLE	IF	CITATIONS
37	Oscillatory command input to the motor pattern generators of the crustacean stomatogastric ganglion. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1981, 143, 453-463.	1.6	37
38	Exposure to heat shock affects thermosensitivity of the locust flight system. , 1996, 29, 367-383.		37
39	Thermal activation of escape swimming in post-hatching <i>Xenopus laevis</i> frog larvae. <i>Journal of Experimental Biology</i> , 2009, 212, 2356-2364.	1.7	37
40	Structure predicts synaptic function of two classes of interneurons in the thoracic ganglia of <i>Locusta migratoria</i> . <i>Cell and Tissue Research</i> , 1987, 250, 105-114.	2.9	36
41	A role for octopamine in coordinating thermoprotection of an insect nervous system. <i>Journal of Thermal Biology</i> , 2006, 31, 149-158.	2.5	36
42	Octopamine Mediates Thermal Preconditioning of the Locust Ventilatory Central Pattern Generator via a cAMP/Protein Kinase A Signaling Pathway. <i>Journal of Neuroscience</i> , 2006, 26, 12118-12126.	3.6	36
43	Timing of Locomotor Recovery from Anoxia Modulated by the <i>white</i> Gene in <i>Drosophila</i> . <i>Genetics</i> , 2016, 203, 787-797.	2.9	36
44	The Critical Role of Spreading Depolarizations in Early Brain Injury: Consensus and Contention. <i>Neurocritical Care</i> , 2022, 37, 83-101.	2.4	36
45	Long-Term Effects of Prior Heat Shock on Neuronal Potassium Currents Recorded in a Novel Insect Ganglion Slice Preparation. <i>Journal of Neurophysiology</i> , 1999, 81, 795-802.	1.8	35
46	Heat shock protects synaptic transmission in flight motor circuitry of locusts. <i>NeuroReport</i> , 1998, 9, 2589-2593.	1.2	34
47	Neural shutdown under stress: an evolutionary perspective on spreading depolarization. <i>Journal of Neurophysiology</i> , 2020, 123, 885-895.	1.8	33
48	Heat Stress-Mediated Plasticity in a Locust Looming-Sensitive Visual Interneuron. <i>Journal of Neurophysiology</i> , 2005, 93, 1908-1919.	1.8	32
49	Locomotion Induced by Spatial Restriction in Adult <i>Drosophila</i> . <i>PLoS ONE</i> , 2015, 10, e0135825.	2.5	30
50	Stress-induced thermotolerance of ventilatory motor pattern generation in the locust, <i>Locusta migratoria</i> . <i>Journal of Insect Physiology</i> , 2003, 49, 1039-1047.	2.0	28
51	Heat shock-induced thermoprotection of action potentials in the locust flight system. <i>Journal of Neurobiology</i> , 2001, 49, 188-199.	3.6	27
52	Na ⁺ -K ⁺ -ATPase trafficking induced by heat shock pretreatment correlates with increased resistance to anoxia in locusts. <i>Journal of Neurophysiology</i> , 2014, 112, 814-823.	1.8	27
53	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. <i>Journal of Neurophysiology</i> , 2016, 116, 1152-1160.	1.8	27
54	Effects of temperature on properties of flight neurons in the locust. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1994, 175, 193-202.	1.6	26

#	ARTICLE	IF	CITATIONS
55	Hyperthermic Preconditioning of Presynaptic Calcium Regulation in <i>Drosophila</i> . Journal of Neurophysiology, 2008, 99, 2420-2430.	1.8	26
56	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
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	K ⁺ homeostasis and central pattern generation in the metathoracic ganglion of the locust. Journal of Insect Physiology, 2009, 55, 599-607.	2.0	24
59	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
60	Control of rhythmic behaviour by a hierarchy of linked oscillators in crustacea. Neuroscience Letters, 1981, 21, 111-116.	2.1	23
61	Different age-dependent performance in <i>Drosophila</i> wild-type Canton-S and the white mutant w ¹¹¹⁸ flies. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2017, 206, 17-23.	1.8	23
62	Metabolic Stress Modulates Motor Patterning via AMP-Activated Protein Kinase. Journal of Neuroscience, 2011, 31, 3207-3216.	3.6	22
63	Neural dysfunction correlates with heat coma and CT _{max} in <i>Drosophila</i> but does not set the boundaries for heat stress survival. Journal of Experimental Biology, 2020, 223, .	1.7	22
64	Effects of temperature on synaptic potentials in the locust flight system. Journal of Neurophysiology, 1993, 70, 2197-2204.	1.8	21
65	Protective effect of hypothermia on brain potassium homeostasis during repetitive anoxia in <i>Drosophila melanogaster</i> . Journal of Experimental Biology, 2012, 215, 4157-65.	1.7	21
66	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
67	A local circuit interaction in the flight system of the locust. Journal of Neuroscience, 1988, 8, 3929-3936.	3.6	19
68	Role of ATP-Dependent Calcium Regulation in Modulation of <i>Drosophila</i> Synaptic Thermotolerance. Journal of Neurophysiology, 2009, 102, 901-913.	1.8	19
69	Possible Involvement of Cone Opsins in Distinct Photoresponses of Intrinsically Photosensitive Dermal Chromatophores in <i>Tilapia Oreochromis niloticus</i> . PLoS ONE, 2013, 8, e70342.	2.5	19
70	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
71	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
72	Temperature Dependency of Wing-Beat Frequency in Intact and Deafferented Locusts. Journal of Experimental Biology, 1992, 162, 295-312.	1.7	18

#	ARTICLE	IF	CITATIONS
73	Questioning Glutamate Excitotoxicity in Acute Brain Damage: The Importance of Spreading Depolarization. <i>Neurocritical Care</i> , 2022, 37, 11-30.	2.4	18
74	Role for calcium in heat shock-mediated synaptic thermoprotection in <i>Drosophila</i> larvae. <i>Journal of Neurobiology</i> , 2003, 56, 360-371.	3.6	17
75	Neural parameters contributing to temperature compensation in the flight CPG of the locust, <i>Locusta migratoria</i> . <i>Brain Research</i> , 1996, 734, 213-222.	2.2	16
76	White - cGMP Interaction Promotes Fast Locomotor Recovery from Anoxia in Adult <i>Drosophila</i> . <i>PLoS ONE</i> , 2017, 12, e0168361.	2.5	16
77	Reduction in Neural Performance following Recovery from Anoxic Stress Is Mimicked by AMPK Pathway Activation. <i>PLoS ONE</i> , 2014, 9, e88570.	2.5	15
78	A new direction for spreading depolarization: Investigation in the fly brain. <i>Channels</i> , 2017, 11, 97-98.	2.8	15
79	Interneurons in the flight system of the cricket <i>Teleogryllus oceanicus</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1987, 160, 431-445.	1.6	14
80	A role for the cytoskeleton in heat-shock-mediated thermoprotection of locust neuromuscular junctions. <i>Journal of Neurobiology</i> , 2004, 60, 453-462.	3.6	14
81	Disruption of the blood-brain barrier exacerbates spreading depression in the locust CNS. <i>Journal of Insect Physiology</i> , 2014, 66, 1-9.	2.0	14
82	Cell swelling increases the severity of spreading depression in <i>Locusta migratoria</i> . <i>Journal of Neurophysiology</i> , 2015, 114, 3111-3120.	1.8	14
83	Rapid cold hardening and octopamine modulate chill tolerance in <i>Locusta migratoria</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2019, 234, 28-35.	1.8	14
84	Effects of maturation on synaptic potentials in the locust flight system. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1994, 175, 437.	1.6	13
85	Enhancement of Short-Term Synaptic Plasticity by Prior Environmental Stress. <i>Journal of Neurophysiology</i> , 2001, 85, 1332-1335.	1.8	13
86	The Nitric Oxide/cGMP Pathway Tunes the Thermosensitivity of Swimming Motor Patterns in <i>Xenopus laevis</i> Tadpoles. <i>Journal of Neuroscience</i> , 2009, 29, 13945-13951.	3.6	13
87	Protein expression following heat shock in the nervous system of <i>Locusta migratoria</i> . <i>Journal of Insect Physiology</i> , 2011, 57, 1480-1488.	2.0	13
88	Persistent One-Way Walking in a Circular Arena in <i>Drosophila melanogaster</i> Canton-S Strain. <i>Behavior Genetics</i> , 2018, 48, 80-93.	2.1	13
89	Cytoskeletal stability and heat shock-mediated thermoprotection of central pattern generation in <i>Locusta migratoria</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2007, 147, 344-348.	1.8	11
90	Functional characterisation of the chromatically antagonistic photosensitive mechanism of erythrophores in the tilapia <i>Oreochromis niloticus</i> . <i>Journal of Experimental Biology</i> , 2015, 218, 748-756.	1.7	11

#	ARTICLE	IF	CITATIONS
91	Pulsed Light Stimulation Increases Boundary Preference and Periodicity of Episodic Motor Activity in <i>Drosophila melanogaster</i> . PLoS ONE, 2016, 11, e0163976.	2.5	11
92	Octopamine stabilizes conduction reliability of an unmyelinated axon during hypoxic stress. Journal of Neurophysiology, 2016, 116, 949-959.	1.8	10
93	Ionic mechanisms maintaining action potential conduction velocity at high firing frequencies in an unmyelinated axon. Physiological Reports, 2016, 4, e12814.	1.7	10
94	Activity-dependence of spreading depression in the locust CNS. Journal of Experimental Biology, 2016, 219, 626-30.	1.7	10
95	Motor patterning, ion regulation and spreading depolarization during CNS shutdown induced by experimental anoxia in <i>Locusta migratoria</i> . Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2021, 260, 111022.	1.8	10
96	Firing between two spike thresholds: implications for oscillating lobster interneurons. Science, 1981, 214, 941-943.	12.6	9
97	Structure of the forewing stretch receptor axon in immature and mature adult locusts. , 1996, 365, 268-277.		9
98	Synaptic thermoprotection in a desert-dwelling <i>Drosophila</i> species. Journal of Neurobiology, 2005, 64, 170-180.	3.6	9
99	Inhibition of ATP-sensitive potassium channels exacerbates anoxic coma in <i>Locusta migratoria</i> . Journal of Neurophysiology, 2020, 124, 1754-1765.	1.8	9
100	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
101	The influence of chromatic background on the photosensitivity of tilapia erythrophores. Biology Open, 2014, 3, 117-120.	1.2	8
102	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
103	Effects of brief chilling and desiccation on ion homeostasis in the central nervous system of the migratory locust, <i>Locusta migratoria</i> . Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2020, 249, 110774.	1.8	8
104	Photoperiod-induced plasticity of thermosensitivity and acquired thermotolerance in <i>Locusta migratoria</i> . Journal of Experimental Biology, 2006, 209, 4690-4700.	1.7	7
105	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
106	Ontogeny of melanophore photosensitivity in rainbow trout (<i>Oncorhynchus mykiss</i>). Biology Open, 2014, 3, 1032-1036.	1.2	7
107	The origin of the "channel arrest" hypothesis. Journal of Experimental Biology, 2017, 220, 1747-1748.	1.7	7
108	AMP-activated protein kinase protects against anoxia in <i>Drosophila melanogaster</i> . Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2017, 214, 30-39.	1.8	7

#	ARTICLE	IF	CITATIONS
109	Anoxia tolerance of the adult Australian Plague Locust (<i>Chortoicetes terminifera</i>). <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2019, 229, 81-92.	1.8	7
110	Role of adenosine in functional recovery following anoxic coma in <i>Locusta migratoria</i> . <i>Journal of Insect Physiology</i> , 2020, 124, 104057.	2.0	7
111	Free-Flight Ability in Locusts Recovering from Partial Deafferentation. <i>Die Naturwissenschaften</i> , 1998, 85, 167-170.	1.6	6
112	Acoustic startle/escape reactions in tethered flying locusts: motor patterns and wing kinematics underlying intentional steering. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2004, 190, 581-600.	1.6	6
113	Potential of <i>Ulva lactuca</i> for municipal wastewater bioremediation and fly food. , 0, 91, 23-30.		6
114	Rapid cold hardening delays the onset of anoxia-induced coma via an octopaminergic pathway in <i>Locusta migratoria</i> . <i>Journal of Insect Physiology</i> , 2022, 137, 104360.	2.0	6
115	Rapid cold hardening increases axonal Na ⁺ /K ⁺ -ATPase activity and enhances performance of a visual motion detection circuit in <i>Locusta migratoria</i> . <i>Journal of Experimental Biology</i> , 2022, 225, .	1.7	6
116	Long-lasting effects of chemical hypoxia on spinal cord function in tadpoles. <i>NeuroReport</i> , 2010, 21, 943-947.	1.2	5
117	Experimental evolution of response to anoxia in <i>Drosophila</i> : recovery of locomotion following CO ₂ or N ₂ exposure. <i>Journal of Experimental Biology</i> , 2019, 222, .	1.7	4
118	Tissue-specific targeting of Hsp26 has no effect on heat resistance of neural function in larval <i>Drosophila</i> . <i>Cell Stress and Chaperones</i> , 2008, 13, 85-95.	2.9	3
119	Food deprivation and prior anoxic coma have opposite effects on the activity of a visual interneuron in the locust. <i>Journal of Insect Physiology</i> , 2017, 98, 336-346.	2.0	2
120	Neural control of flight in locusts. , 2020, , 75-95.		0
121	Knockdown of a Cyclic Nucleotide-Gated Ion Channel Impairs Locomotor Activity and Recovery From Hypoxia in Adult <i>Drosophila melanogaster</i> . <i>Frontiers in Physiology</i> , 2022, 13, 852919.	2.8	0