Makoto Mizunami

List of Publications by Year
in descending order

101 papers	3,460 citations	136940 32 h-index	168376 53 g-index
102 all docs	102 docs citations	102 times ranked	1605 citing authors

#	Article	IF	Citations
1	Mushroom bodies of the cockroach: Their participation in place memory. Journal of Comparative Neurology, 1998, 402, 520-537.	1.6	269
2	Participation of octopaminergic reward system and dopaminergic punishment system in insect olfactory learning revealed by pharmacological study. European Journal of Neuroscience, 2005, 22, 1409-1416.	2.6	188
3	Roles of octopaminergic and dopaminergic neurons in mediating reward and punishment signals in insect visual learning. European Journal of Neuroscience, 2006, 24, 2031-2038.	2.6	127
4	Mushroom bodies of the cockroach: Activity and identities of neurons recorded in freely moving animals. Journal of Comparative Neurology, 1998, 402, 501-519.	1.6	115
5	Critical role of nitric oxide-cGMP cascade in the formation of cAMP-dependent long-term memory. Learning and Memory, 2006, 13, 35-44.	1.3	102
6	Roles of octopaminergic and dopaminergic neurons in appetitive and aversive memory recall in an insect. BMC Biology, 2009, 7, 46.	3.8	94
7	Temporal determinants of long-term retention of olfactory memory in the cricket <i>Gryllus bimaculatus</i>. Journal of Experimental Biology, 2002, 205, 1429-1437.	1.7	92
8	Knockout crickets for the study of learning and memory: Dopamine receptor Dop1 mediates aversive but not appetitive reinforcement in crickets. Scientific Reports, 2015, 5, 15885.	3.3	79
9	Projection neurons originating from thermoâ€•and hygrosensory glomeruli in the antennal lobe of the cockroach. Journal of Comparative Neurology, 2003, 455, 40-55.	1.6	77
10	Convergence of multimodal sensory pathways to the mushroom body calyx in Drosophila melanogaster. Scientific Reports, 2016, 6, 29481.	3.3	71
11	Distribution of dendrites of descending neurons and its implications for the basic organization of the cockroach brain. Journal of Comparative Neurology, 2003, 458, 158-174.	1.6	70
12	Temporal determinants of long-term retention of olfactory memory in the cricket Gryllus bimaculatus. Journal of Experimental Biology, 2002, 205, 1429-37.	1.7	67
13	Context-Dependent Olfactory Learning in an Insect. Learning and Memory, 2004, 11, 288-293.	1.3	66
14	Functional diversity of neural organization in insect ocellar systems. Vision Research, 1995, 35, 443-452.	1.4	64
15	Functional and topographic segregation of glomeruli revealed by local staining of antennal sensory neurons in the honeybee <i>Apis mellifera</i>. Journal of Comparative Neurology, 2009, 515, 161-180.	1.6	61
16	Classical Olfactory Conditioning in the Cockroach Periplaneta americana. Zoological Science, 2003, 20, 1447-1454.	0.7	59
17	Differential odor processing in two olfactory pathways in the honeybee. Frontiers in Systems Neuroscience, 2009, 3, 16.	2.5	58
18	Time Course of Protein Synthesis-Dependent Phase of Olfactory Memory in the Cricket Gryllus bimaculatus. Zoological Science, 2003, 20, 409-416.	0.7	57

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19	Dual, multilayered somatosensory maps formed by antennal tactile and contact chemosensory afferents in an insect brain. Journal of Comparative Neurology, 2005, 493, 291-308.	1.6	55
20	Why the carrot is more effective than the stick: Different dynamics of punishment memory and reward memory and its possible biological basis. Neurobiology of Learning and Memory, 2009, 92, 370-380.	1.9	54
21	Behavioral Responses to the Alarm Pheromone of the Ant Camponotus obscuripes (Hymenoptera:) Tj ETQq1 1 0.784314 rgBT /Overlock	0.7	52
22	Complete mapping of glomeruli based on sensory nerve branching pattern in the primary olfactory center of the cockroach <i>Periplaneta americana</i>. Journal of Comparative Neurology, 2010, 518, 3907-3930.	1.6	49
23	Information Processing in the Insect Ocellar System: Comparative Approaches t o the Evolution of Visual Processing and Neural Circuits. Advances in Insect Physiology, 1995, 25, 151-265.	2.7	48
24	Systemic RNA interference for the study of learning and memory in an insect. Journal of Neuroscience Methods, 2009, 179, 9-15.	2.5	46
25	Pavlov's Cockroach: Classical Conditioning of Salivation in an Insect. PLoS ONE, 2007, 2, e529.	2.5	44
26	Three classes of GABA-like immunoreactive neurons in the mushroom body of the cockroach. Brain Research, 1998, 788, 80-86.	2.2	43
27	Topography of four classes of kenyon cells in the mushroom bodies of the cockroach. , 1998, 399, 162-175.		43
28	Olfactory Learning and Memory in the Cockroach Periplaneta americana. Zoological Science, 2001, 18, 21-28.	0.7	43
29	Modular structures in the mushroom body of the cockroach. Neuroscience Letters, 1997, 229, 153-156.	2.1	42
30	Further exploration into the adaptive design of the arthropod â€œmicrobrainâ€: I. Sensory and memory-processing systems. Zoological Science, 2004, 21, 1141-1151.	0.7	37
31	Cyclic nucleotideâ€"gated channels, calmodulin, adenylyl cyclase, and calcium/calmodulin-dependent protein kinase II are required for late, but not early, long-term memory formation in the honeybee. Learning and Memory, 2014, 21, 272-286.	1.3	37
32	Topography of modular subunits in the mushroom bodies of the cockroach. , 1998, 399, 153-161.		36
33	Giant input neurons of the mushroom body: intracellular recording and staining in the cockroach. Neuroscience Letters, 1998, 246, 57-60.	2.1	36
34	Classical conditioning of activities of salivary neurones in the cockroach. Journal of Experimental Biology, 2006, 209, 766-779.	1.7	35
35	Stimulation of the cAMP system by the nitric oxide-cGMP system underlying the formation of long-term memory in an insect. Neuroscience Letters, 2009, 467, 81-85.	2.1	35
36	Roles of Octopamine and Dopamine Neurons for Mediating Appetitive and Aversive Signals in Pavlovian Conditioning in Crickets. Frontiers in Physiology, 2017, 8, 1027.	2.8	35

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37	Roles of OA1 octopamine receptor and Dop1 dopamine receptor in mediating appetitive and aversive reinforcement revealed by RNAi studies. Scientific Reports, 2016, 6, 29696.	3.3	34
38	Spatial Receptive Fields for Odor Localization. Current Biology, 2018, 28, 600-608.e3.	3.9	34
39	Exploration into the Adaptive Design of the Arthropod â€œMicrobrainâ€• Zoological Science, 1999, 16, 703-709.	0.7	32
40	Alarm pheromone processing in the ant brain: an evolutionary perspective. Frontiers in Behavioral Neuroscience, 2010, 4, 28.	2.0	29
41	Roles of Aminergic Neurons in Formation and Recall of Associative Memory in Crickets. Frontiers in Behavioral Neuroscience, 2010, 4, 172.	2.0	29
42	Roles of octopamine and dopamine in appetitive and aversive memory acquisition studied in olfactory conditioning of maxillary palpi extension response in crickets. Frontiers in Behavioral Neuroscience, 2015, 9, 230.	2.0	29
43	Visual and olfactory input segregation in the mushroom body calyces in a basal neopteran, the American cockroach. Arthropod Structure and Development, 2012, 41, 3-16.	1.4	28
44	Critical evidence for the prediction error theory in associative learning. Scientific Reports, 2015, 5, 8929.	3.3	28
45	Intracellular stainings of the large ocellar second order neurons in the cockroach. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1982, 149, 215-219.	1.6	27
46	Olfactory memory capacity of the cricket Gryllus bimaculatus. Biology Letters, 2006, 2, 608-610.	2.3	26
47	Dopamine- and Tyrosine Hydroxylase-Immunoreactive Neurons in the Brain of the American Cockroach, Periplaneta americana. PLoS ONE, 2016, 11, e0160531.	2.5	26
48	Critical roles of mecamylamine-sensitive mushroom body neurons in insect olfactory learning. Neurobiology of Learning and Memory, 2011, 95, 1-13.	1.9	24
49	Function-specific distribution patterns of axon terminals of input neurons in the calyces of the mushroom body of the cockroach, Periplaneta americana. Neuroscience Letters, 1998, 245, 33-36.	2.1	23
50	Contextual olfactory learning in cockroaches. NeuroReport, 2006, 17, 553-557.	1.2	23
51	Pheromone-sensitive glomeruli in the primary olfactory centre of ants. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 2219-2225.	2.6	23
52	Two Parallel Olfactory Pathways for Processing General Odors in a Cockroach. Frontiers in Neural Circuits, 2017, 11, 32.	2.8	23
53	Postembryonic development of sexually dimorphic glomeruli and related interneurons in the cockroach Periplaneta americana. Neuroscience Letters, 2010, 469, 60-64.	2.1	22
54	Toward elucidating diversity of neural mechanisms underlying insect learning. Zoological Letters, 2015, 1, 8.	1.3	22

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55	Neural organization of ocellar pathways in the cockroach brain. Journal of Comparative Neurology, 1995, 352, 458-468.	1.6	21
56	Divergent and convergent projections to the two parallel olfactory centers from two neighboring, pheromoneâ€receptive glomeruli in the male American cockroach. Journal of Comparative Neurology, 2012, 520, 3428-3445.	1.6	20
57	Analysis and modeling of neural processes underlying sensory preconditioning. Neurobiology of Learning and Memory, 2013, 101, 103-113.	1.9	20
58	Sensilla position on antennae influences afferent terminal location in glomeruli. NeuroReport, 2007, 18, 1765-1769.	1.2	19
59	Neural pathways for the processing of alarm pheromone in the ant brain. Journal of Comparative Neurology, 2007, 505, 424-442.	1.6	18
60	Complete identification of four giant interneurons supplying mushroom body calyces in the cockroach <i>Periplaneta americana</i>. Journal of Comparative Neurology, 2017, 525, 204-230.	1.6	18
61	Classification of Ocellar Interneurones in the Cockroach Brain. Journal of Experimental Biology, 1986, 125, 57-70.	1.7	18
62	Context-dependent olfactory learning monitored by activities of salivary neurons in cockroaches. Neurobiology of Learning and Memory, 2012, 97, 30-36.	1.9	17
63	Roles of dopamine neurons in mediating the prediction error in aversive learning in insects. Scientific Reports, 2017, 7, 14694.	3.3	17
64	Signaling Pathways for Long-Term Memory Formation in the Cricket. Frontiers in Psychology, 2018, 9, 1014.	2.1	17
65	Different growth patterns of two adjacent glomeruli responsible for sex-pheromone processing during postembryonic development of the cockroach Periplaneta americana. Neuroscience Letters, 2009, 462, 219-224.	2.1	16
66	Morphology of higher-order ocellar interneurons in the cockroach brain. Journal of Comparative Neurology, 1995, 362, 293-304.	1.6	15
67	Salivary conditioning with antennal gustatory unconditioned stimulus in an insect. Neurobiology of Learning and Memory, 2008, 90, 245-254.	1.9	15
68	Pheromone Detection by a Pheromone Emitter: A Small Sex Pheromone-Specific Processing System in the Female American Cockroach. Chemical Senses, 2011, 36, 261-270.	2.0	15
69	Roles of NO Signaling in Long-Term Memory Formation in Visual Learning in an Insect. PLoS ONE, 2013, 8, e68538.	2.5	15
70	Roles of Calcium/Calmodulin-Dependent Kinase II in Long-Term Memory Formation in Crickets. PLoS ONE, 2014, 9, e107442.	2.5	15
71	Interaction of inhibitory and facilitatory effects of conditioning trials on long-term memory formation. Learning and Memory, 2016, 23, 669-678.	1.3	14
72	Application of a Prediction Error Theory to Pavlovian Conditioning in an Insect. Frontiers in Psychology, 2018, 9, 1272.	2.1	14

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73	Pheromone communication and the mushroom body of the ant, Camponotus obscuripes (Hymenoptera:) Tj ETQq1 1 0.784314 rgBT /O	1.6	13
74	Threeâ€dimensional brain atlas of pygmy squid, Idiosepius paradoxus , revealing the largest relative vertical lobe system volume among the cephalopods. Journal of Comparative Neurology, 2016, 524, 2142-2157.	1.6	13
75	Calcium-Dependent Action Potentials in the Second-Order Neurones of Cockroach Ocelli. Journal of Experimental Biology, 1987, 130, 259-274.	1.7	12
76	Termination profiles of insect chemosensory afferents in the antennal lobe are dependent on their origin on the flagellum. NeuroReport, 2006, 17, 1303-1307.	1.2	11
77	Participation of NO signaling in formation of long-term memory in salivary conditioning of the cockroach. Neuroscience Letters, 2013, 541, 4-8.	2.1	11
78	Effects of Caffeine on Olfactory Learning in Crickets. Zoological Science, 2016, 33, 513-519.	0.7	11
79	Spatial representation of alarm pheromone information in a secondary olfactory centre in the ant brain. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 2465-2474.	2.6	10
80	Activation of NO-cGMP Signaling Rescues Age-Related Memory Impairment in Crickets. Frontiers in Behavioral Neuroscience, 2016, 10, 166.	2.0	10
81	Formation of Long-term Olfactory Memory in the Cricket Gryllus bimaculatus. Chemical Senses, 2005, 30, i299-i300.	2.0	9
82	Status of and Future Research on Thermosensory Processing. Frontiers in Physiology, 2016, 7, 150.	2.8	9
83	Group-housed females promote production of asexual ootheca in American cockroaches. Zoological Letters, 2017, 3, 3.	1.3	9
84	What Is Learned in Pavlovian Conditioning in Crickets? Revisiting the S-S and S-R Learning Theories. Frontiers in Behavioral Neuroscience, 2021, 15, 661225.	2.0	9
85	Silencing the odorant receptor co-receptor impairs olfactory reception in a sensillum-specific manner in the cockroach. IScience, 2022, 25, 104272.	4.1	9
86	Separate But Interactive Parallel Olfactory Processing Streams Governed by Different Types of GABAergic Feedback Neurons in the Mushroom Body of a Basal Insect. Journal of Neuroscience, 2019, 39, 8690-8704.	3.6	8
87	Appetitive and aversive social learning with living and dead conspecifics in crickets. Scientific Reports, 2020, 10, 9340.	3.3	8
88	Coarse topographic organization of pheromone-sensitive afferents from different antennal surfaces in the American cockroach. Neuroscience Letters, 2015, 595, 35-40.	2.1	7
89	Olfactory and Visual Learning in Cockroaches and Crickets. Handbook of Behavioral Neuroscience, 2013, , 549-560.	0.7	5
90	Calcium imaging method to visualize the spatial patterns of neural responses in the pygmy squid, Idiosepius paradoxus, central nervous system. Journal of Neuroscience Methods, 2018, 294, 67-71.	2.5	5

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91	Development of behavioural automaticity by extended Pavlovian training in an insect. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20182132.	2.6	5
92	Functional unification of sex pheromone-receptive glomeruli in the invasive Turkestan cockroach derived from the genus Periplaneta. Neuroscience Letters, 2019, 708, 134320.	2.1	3
93	Tyrosine hydroxylase-immunoreactive neurons in the mushroom body of the field cricket, Gryllus bimaculatus. Cell and Tissue Research, 2019, 376, 97-111.	2.9	3
94	Learning and Memory. , 2017, , 129-140.		2
95	Development of Invertebrate Brain Platform: Management of Research Resources for Invertebrate Neuroscience and Neuroethology. Lecture Notes in Computer Science, 2007, , 905-914.	1.3	2
96	Reduction of contextual control of conditioned responses by extended Pavlovian training in an insect. Learning and Memory, 2021, 28, 17-23.	1.3	2
97	Protocols for Olfactory Conditioning Experiments. , 2017, , 273-284.		1
98	Dynamics of Second-Order Neurons of Cockroach Ocelli. , 1989, , 71-84.		1
99	Pavlovian Learning in Invertebrates. , 2019, , 403-410.		0
100	Spontaneous recovery from overexpectation in an insect. Scientific Reports, 2022, 12, .	3.3	0
101	Conditioned taste aversion in the cricket Gryllus bimaculatus. Scientific Reports, 2022, 12, .	3.3	0