Richard Benton

List of Publications by Year
in descending order

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Version: 2024-02-01

55 papers	7,213 citations	186265 28 h-index	161849 54 g-index
70 all docs	70 docs citations	70 times ranked	4736 citing authors

#	Article	IF	Citations
1	Variant Ionotropic Glutamate Receptors as Chemosensory Receptors in Drosophila. Cell, 2009, 136, 149-162.	28.9	1,207
2	Ancient Protostome Origin of Chemosensory Ionotropic Glutamate Receptors and the Evolution of Insect Taste and Olfaction. PLoS Genetics, 2010, 6, e1001064.	3.5	680
3	Functional Architecture of Olfactory Ionotropic Glutamate Receptors. Neuron, 2011, 69, 44-60.	8.1	545
4	Complementary Function and Integrated Wiring of the Evolutionarily DistinctDrosophilaOlfactory Subsystems. Journal of Neuroscience, 2011, 31, 13357-13375.	3.6	464
5	Genomic insights into the Ixodes scapularis tick vector of Lyme disease. Nature Communications, 2016, 7, 10507.	12.8	450
6	Ionotropic Receptors (IRs): Chemosensory ionotropic glutamate receptors in Drosophila and beyond. Insect Biochemistry and Molecular Biology, 2013, 43, 888-897.	2.7	411
7	Acid sensing by the Drosophila olfactory system. Nature, 2010, 468, 691-695.	27.8	324
8	Drosophila Ionotropic Receptor 25a mediates circadian clock resetting by temperature. Nature, 2015, 527, 516-520.	27.8	216
9	Distinct combinations of variant ionotropic glutamate receptors mediate thermosensation and hygrosensation in Drosophila. ELife, 2016, 5, .	6.0	202
10	The Ionotropic Receptors IR21a and IR25a mediate cool sensing in Drosophila. ELife, 2016, 5, .	6.0	191
11	Evolution of Acid-Sensing Olfactory Circuits in Drosophilids. Neuron, 2017, 93, 661-676.e6.	8.1	182
12	Ionotropic Receptor-dependent moist and dry cells control hygrosensation in Drosophila. ELife, 2017, 6, .	6.0	161
13	Mechanosensory interactions drive collective behaviour in Drosophila. Nature, 2015, 519, 233-236.	27.8	157
14	A CD36 ectodomain mediates insect pheromone detection via a putative tunnelling mechanism. Nature Communications, 2016, 7, 11866.	12.8	149
15	Sexual circuitry in Drosophila. Current Opinion in Neurobiology, 2016, 38, 18-26.	4.2	141
16	Multigene Family Evolution: Perspectives from Insect Chemoreceptors. Trends in Ecology and Evolution, 2015, 30, 590-600.	8.7	140
17	Olfactory receptor pseudo-pseudogenes. Nature, 2016, 539, 93-97.	27.8	140
18	Olfactory receptor and circuit evolution promote host specialization. Nature, 2020, 579, 402-408.	27.8	131

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19	A molecular and neuronal basis for amino acid sensing in the Drosophila larva. Scientific Reports, 2016, 6, 34871.	3.3	121
20	An expression atlas of variant ionotropic glutamate receptors identifies a molecular basis of carbonation sensing. Nature Communications, 2018, 9, 4252.	12.8	116
21	Amino acid coevolution reveals three-dimensional structure and functional domains of insect odorant receptors. Nature Communications, 2015, 6, 6077.	12.8	113
22	Ionotropic Receptors Specify the Morphogenesis of Phasic Sensors Controlling Rapid Thermal Preference in Drosophila. Neuron, 2019, 101, 738-747.e3.	8.1	90
23	Climbing favours the tripod gait over alternative faster insect gaits. Nature Communications, 2017, 8, 14494.	12.8	86
24	A mechanosensory receptor required for food texture detection in Drosophila. Nature Communications, 2017, 8, 14192.	12.8	73
25	Molecular mechanisms of olfactory detection in insects: beyond receptors. Open Biology, 2020, 10, 200252.	3.6	58
26	A cnidarian homologue of an insect gustatory receptor functions in developmental body patterning. Nature Communications, 2015, 6, 6243.	12.8	57
27	Chemical sensing in Drosophila. Current Opinion in Neurobiology, 2008, 18, 357-363.	4.2	49
28	Extensive local adaptation within the chemosensory system following Drosophila melanogasterâ€™s global expansion. Nature Communications, 2016, 7, ncomms11855.	12.8	48
29	Mate discrimination among subspecies through a conserved olfactory pathway. Science Advances, 2020, 6, eaba5279.	10.3	41
30	Visualizing Olfactory Receptor Expression and Localization in Drosophila. Methods in Molecular Biology, 2013, 1003, 211-228.	0.9	41
31	FlyLimbTracker: An active contour based approach for leg segment tracking in unmarked, freely behaving Drosophila. PLoS ONE, 2017, 12, e0173433.	2.5	35
32	Functional integration of â€œundeadâ€•neurons in the olfactory system. Science Advances, 2020, 6, eaaz7238.	10.3	31
33	Sensory neuron lineage mapping and manipulation in the Drosophila olfactory system. Nature Communications, 2019, 10, 643.	12.8	30
34	Calcium Imaging of Odor-evoked Responses in the Drosophila Antennal Lobe. Journal of Visualized Experiments, 2012, , .	0.3	29
35	In vivo assembly and trafficking of olfactory Ionotropic Receptors. BMC Biology, 2019, 17, 34.	3.8	28
36	Drosophila sechellia: A Genetic Model for Behavioral Evolution and Neuroecology. Annual Review of Genetics, 2021, 55, 527-554.	7.6	28

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37	Ir40a neurons are not DEET detectors. Nature, 2016, 534, E5-E7.	27.8	27
38	Molecular evolution of juvenile hormone esterase-like proteins in a socially exchanged fluid. Scientific Reports, 2018, 8, 17830.	3.3	27
39	Second-GenerationDrosophilaChemical Tags: Sensitivity, Versatility, and Speed. Genetics, 2017, 205, 1399-1408.	2.9	25
40	Molecular Basis of Odor Detection in Insects. Annals of the New York Academy of Sciences, 2009, 1170, 478-481.	3.8	19
41	A putative origin of the insect chemosensory receptor superfamily in the last common eukaryotic ancestor. ELife, 2020, 9, .	6.0	16
42	Molecular reconstruction of recurrent evolutionary switching in olfactory receptor specificity. ELife, 2021, 10, .	6.0	15
43	The neurobiology of gustation in insect disease vectors: progress and potential. Current Opinion in Insect Science, 2017, 20, 19-27.	4.4	14
44	Open questions: Tackling Darwinâ€™s â€œinstinctsâ€• the genetic basis of behavioral evolution. BMC Biology, 2017, 15, 26.	3.8	14
45	A partial genome assembly of the miniature parasitoid wasp, Megaphragma amalphitanum. PLoS ONE, 2019, 14, e0226485.	2.5	10
46	Enhanced Retrieval of Taste Associative Memory by Chemogenetic Activation of Locus Coeruleus Norepinephrine Neurons. Journal of Neuroscience, 2020, 40, 8367-8385.	3.6	10
47	Animal Behavior: A Neural Basis of Individuality. Current Biology, 2020, 30, R710-R712.	3.9	9
48	Multisensory neural integration of chemical and mechanical signals. BioEssays, 2017, 39, 1700060.	2.5	8
49	Olfactory receptorâ€“dependent receptor repression in Drosophila. Science Advances, 2021, 7, .	10.3	8
50	Olfactory Receptor Gene Regulation in Insects: Multiple Mechanisms for Singular Expression. Frontiers in Neuroscience, 2021, 15, 738088.	2.8	8
51	Fluctuation-Driven Neural Dynamics Reproduce Drosophila Locomotor Patterns. PLoS Computational Biology, 2015, 11, e1004577.	3.2	6
52	Targeted molecular profiling of rare olfactory sensory neurons identifies fate, wiring, and functional determinants. ELife, 2021, 10, .	6.0	6
53	Decision Making: Singin' in the Brain. Neuron, 2011, 69, 399-401.	8.1	5
54	Chemosensory Ecology: Deceiving Drosophila. Current Biology, 2010, 20, R891-R893.	3.9	1

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55	Neural Circuits: Male Mating Motifs. Neuron, 2015, 87, 912-914.	8.1	0