John R Carlson

List of Publications by Year
in descending order

87 papers	15,466 citations	31976 53 h-index	51608 86 g-index
97 all docs	97 docs citations	97 times ranked	6147 citing authors

#	Article	IF	Citations
1	Coding of Odors by a Receptor Repertoire. Cell, 2006, 125, 143-160.	28.9	1,143
2	A Novel Family of Divergent Seven-Transmembrane Proteins. Neuron, 1999, 22, 327-338.	8.1	1,092
3	The Molecular Basis of Odor Coding in the Drosophila Antenna. Cell, 2004, 117, 965-979.	28.9	799
4	Molecular evolution of the insect chemoreceptor gene superfamily in Drosophila melanogaster. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14537-14542.	7.1	703
5	Odor Coding in the Drosophila Antenna. Neuron, 2001, 30, 537-552.	8.1	657
6	Candidate Taste Receptors in Drosophila. Science, 2000, 287, 1830-1834.	12.6	568
7	Odorant reception in the malaria mosquito Anopheles gambiae. Nature, 2010, 464, 66-71.	27.8	515
8	Integrating the Molecular and Cellular Basis of Odor Coding in the Drosophila Antenna. Neuron, 2003, 37, 827-841.	8.1	504
9	The molecular basis of CO_2 reception in Drosophila. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3574-3578.	7.1	498
10	Olfactory Perception: Receptors, Cells, and Circuits. Cell, 2009, 139, 45-59.	28.9	476
11	Two Gr Genes Underlie Sugar Reception in Drosophila. Neuron, 2007, 56, 503-516.	8.1	401
12	Odor Coding in a Model Olfactory Organ: The<i>Drosophila</i>Maxillary Palp. Journal of Neuroscience, 1999, 19, 4520-4532.	3.6	365
13	Molecular basis of odor coding in the malaria vector mosquito <i>Anopheles gambiae</i>. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4418-4423.	7.1	358
14	The Molecular and Cellular Basis of Bitter Taste in Drosophila. Neuron, 2011, 69, 258-272.	8.1	346
15	Receptors and Neurons for Fly Odors in Drosophila. Current Biology, 2007, 17, 606-612.	3.9	315
16	Odor Coding in the Maxillary Palp of the Malaria Vector Mosquito Anopheles gambiae. Current Biology, 2007, 17, 1533-1544.	3.9	314
17	The Drosophila IR20a Clade of Ionotropic Receptors Are Candidate Taste and Pheromone Receptors. Neuron, 2014, 83, 850-865.	8.1	301
18	Drosophila Chemoreceptors: A Molecular Interface Between the Chemical World and the Brain. Trends in Genetics, 2015, 31, 683-695.	6.7	289

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19	Chemosensory Coding by Neurons in the Coeloconic Sensilla of the Drosophila Antenna. Journal of Neuroscience, 2005, 25, 8359-8367.	3.6	280
20	The Molecular Basis of Odor Coding in the Drosophila Larva. Neuron, 2005, 46, 445-456.	8.1	278
21	Translation of Sensory Input into Behavioral Output via an Olfactory System. Neuron, 2008, 59, 110-124.	8.1	258
22	Generalization of Courtship Learning in Drosophila Is Mediated by cis-Vaccenyl Acetate. Current Biology, 2007, 17, 599-605.	3.9	257
23	A Gr receptor is required for response to the sugar trehalose in taste neurons of Drosophila. Nature Neuroscience, 2001, 4, 1182-1186.	14.8	242
24	Coexpression of Two Functional Odor Receptors in One Neuron. Neuron, 2005, 45, 661-666.	8.1	220
25	Organization and function of Drosophila odorant binding proteins. ELife, 2016, 5, .	6.0	194
26	Drosophila Gr5a encodes a taste receptor tuned to trehalose. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14526-14530.	7.1	192
27	Mosquito receptor for human-sweat odorant. Nature, 2004, 427, 212-213.	27.8	189
28	Odorant response of individual sensilla on theDrosophila antenna. Invertebrate Neuroscience, 1997, 3, 127-135.	1.8	184
29	Insect olfaction from model systems to disease control. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 12987-12995.	7.1	182
30	The Odor Specificities of a Subset of Olfactory Receptor Neurons Are Governed by Acj6, a POU-Domain Transcription Factor. Neuron, 1999, 22, 339-347.	8.1	151
31	The Molecular and Cellular Basis of Taste Coding in the Legs of<i>Drosophila</i>. Journal of Neuroscience, 2014, 34, 7148-7164.	3.6	139
32	An RNA-Seq Screen of the Drosophila Antenna Identifies a Transporter Necessary for Ammonia Detection. PLoS Genetics, 2014, 10, e1004810.	3.5	130
33	Olfaction in Drosophila: from odor to behavior. Trends in Genetics, 1996, 12, 175-180.	6.7	128
34	Symbiont-induced odorant binding proteins mediate insect host hematopoiesis. ELife, 2017, 6, .	6.0	125
35	Targeted Mutation of a<i>Drosophila</i>Odor Receptor Defines Receptor Requirement in a Novel Class of Sensillum. Journal of Neuroscience, 2003, 23, 9906-9912.	3.6	124
36	Insects as chemosensors of humans and crops. Nature, 2006, 444, 302-307.	27.8	124

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37	Intensity Invariant Dynamics and Odor-Specific Latencies in Olfactory Receptor Neuron Response. Journal of Neuroscience, 2013, 33, 6285-6297.	3.6	122
38	Characterization of the larval olfactory response inDrosophila and its genetic basis. Behavior Genetics, 1989, 19, 267-283.	2.1	110
39	Molecular and Cellular Organization of the Taste System in the<i>Drosophila</i>Larva. Journal of Neuroscience, 2011, 31, 15300-15309.	3.6	105
40	Functional diversity among sensory receptors in a <i>Drosophila</i> olfactory circuit. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2134-43.	7.1	105
41	Olfactory physiology in theDrosophila antenna and maxillary palp:acj6 Distinguishes two classes of odorant pathways. Journal of Neurobiology, 1992, 23, 965-982.	3.6	103
42	Coexpression of Two Odorant-Binding Protein Homologs in<i>Drosophila</i>: Implications for Olfactory Coding. Journal of Neuroscience, 1997, 17, 1616-1624.	3.6	101
43	Mechanisms of Odor Receptor Gene Choice in Drosophila. Neuron, 2007, 53, 353-369.	8.1	101
44	The diverse small proteins called odorant-binding proteins. Open Biology, 2018, 8, 180208.	3.6	100
45	Candidate ionotropic taste receptors in the <i>Drosophila</i> larva. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4195-4201.	7.1	97
46	Olfactory Adaptation Depends on the Trp Ca²⁺Channel in<i>Drosophila</i>. Journal of Neuroscience, 1999, 19, 4839-4846.	3.6	95
47	Reverse-correlation analysis of navigation dynamics in Drosophila larva using optogenetics. ELife, 2015, 4, .	6.0	90
48	Role of G-Proteins in Odor-Sensing and CO₂-Sensing Neurons in Drosophila. Journal of Neuroscience, 2010, 30, 4562-4572.	3.6	89
49	Temporal coding of odor mixtures in an olfactory receptor neuron. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5075-5080.	7.1	81
50	Robust olfactory responses in the absence of odorant binding proteins. ELife, 2019, 8, .	6.0	69
51	Development and organization of theDrosophila olfactory system: An analysis using enhancer traps. Journal of Neurobiology, 1992, 23, 947-964.	3.6	64
52	A Regulatory Code for Neuron-Specific Odor Receptor Expression. PLoS Biology, 2008, 6, e125.	5.6	62
53	Malaria Parasites Produce Volatile Mosquito Attractants. MBio, 2015, 6, .	4.1	61
54	Male-male courtship behavior induced by ectopic expression of theDrosophila white gene: Role of sensory function and age. , 1996, 30, 454-464.		60

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55	Molecular Logic and Evolution of Bitter Taste in Drosophila. Current Biology, 2020, 30, 17-30.e3.	3.9	60
56	The<i>rdgB</i>Gene of<i>Drosophila</i>: A Link Between Vision and Olfaction. Journal of Neurogenetics, 1992, 8, 17-31.	1.4	52
57	Bitter taste receptors confer diverse functions to neurons. ELife, 2016, 5, .	6.0	52
58	A receptor and neuron that activate a circuit limiting sucrose consumption. ELife, 2017, 6, .	6.0	51
59	A map of taste neuron projections in the Drosophila CNS. Journal of Biosciences, 2014, 39, 565-574.	1.1	49
60	Humidity response depends on the small soluble protein Obp59a in Drosophila. ELife, 2018, 7, .	6.0	49
61	Chemosensory sensilla of the Drosophila wing express a candidate ionotropic pheromone receptor. PLoS Biology, 2019, 17, e2006619.	5.6	44
62	Positive and Negative Regulation of Odor Receptor Gene Choice in Drosophila by Acj6. Journal of Neuroscience, 2009, 29, 12940-12947.	3.6	38
63	Evolutionary shifts in taste coding in the fruit pest Drosophila suzukii. ELife, 2021, 10, .	6.0	38
64	Similar Odorants Elicit Different Behavioral and Physiological Responses, Some Supersustained. Journal of Neuroscience, 2011, 31, 7891-7899.	3.6	37
65	The molecular and cellular basis of olfactory response to tsetse fly attractants. PLoS Genetics, 2019, 15, e1008005.	3.5	34
66	Scutoid mutation of drosophila melanogaster specifically decreases olfactory responses to short-chain acetate esters and ketones. Journal of Neurobiology, 1995, 28, 214-233.	3.6	32
67	Distinct Functions of<i>acj6</i>Splice Forms in Odor Receptor Gene Choice. Journal of Neuroscience, 2010, 30, 5028-5036.	3.6	29
68	Regulation of Odor Receptor Genes in Trichoid Sensilla of the Drosophila Antenna. Genetics, 2010, 186, 79-95.	2.9	22
69	Chemosensory behavior: the path from stimulus to response. Current Opinion in Neurobiology, 1999, 9, 766-771.	4.2	21
70	The mosquito taste system and disease control. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 32848-32856.	7.1	21
71	Ir56b is an atypical ionotropic receptor that underlies appetitive salt response in Drosophila. Current Biology, 2022, 32, 1776-1787.e4.	3.9	20
72	Odor coding in the antenna of the tsetse fly <i>Glossina morsitans</i>. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14300-14308.	7.1	19

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73	OS9: A novel olfactory gene ofDrosophila expressed in two olfactory organs. Journal of Neurobiology, 1994, 25, 169-184.	3.6	18
74	The maxillary palp of Drosophila â€Š: ultrastructure and physiology depends on the lozenge gene. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1997, 180, 143-150.	1.6	18
75	Sight of parasitoid wasps accelerates sexual behavior and upregulates a micropeptide gene in Drosophila. Nature Communications, 2021, 12, 2453.	12.8	18
76	Physiological responses of the Drosophila labellum to amino acids. Journal of Neurogenetics, 2018, 32, 27-36.	1.4	15
77	Electrophysiological Recording From Drosophila Labellar Taste Sensilla. Journal of Visualized Experiments, 2014, , e51355.	0.3	14
78	Meeting a threat of the Anthropocene: Taste avoidance of metal ions by <i>Drosophila</i>. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	13
79	Olfactory Coding in a Compound Nose: Coexpression of Odorant-Binding Proteins in Drosophilaa. Annals of the New York Academy of Sciences, 1998, 855, 311-315.	3.8	9
80	Viewing odors in the mushroom body of the fly. Trends in Neurosciences, 2001, 24, 497-498.	8.6	9
81	Twelve ways to look at a receptor. Journal of Cell Science, 2002, 115, 3979-3979.	2.0	8
82	Sensory Biology: Structure of an Insect Chemoreceptor. Current Biology, 2018, 28, R1202-R1205.	3.9	6
83	Genetic and Molecular Studies of Olfaction in <i>Drosophila</i>. Novartis Foundation Symposium, 1996, 200, 285-301.	1.1	2
84	Editorial overview: Molecular biology of sensation. Current Opinion in Neurobiology, 2015, 34, v-vi.	4.2	2
85	Olfaction: Receptor Antagonistes. Current Biology, 2020, 30, R815-R817.	3.9	2
86	A Welcome to Drosophila Olfaction. Journal of Neurogenetics, 2012, 26, 262-263.	1.4	1
87	Molecules That Can Rewire the Taste System. Biochemistry, 2017, 56, 6075-6076.	2.5	1