Walter S Leal

List of Publications by Year
in descending order

130 papers	8,400 citations	50276 46 h-index	49909 87 g-index
141 all docs	141 docs citations	141 times ranked	3984 citing authors

#	Article	IF	Citations
1	Odorant Reception in Insects: Roles of Receptors, Binding Proteins, and Degrading Enzymes. Annual Review of Entomology, 2013, 58, 373-391.	11.8	1,443
2	Sexual attraction in the silkworm moth: structure of the pheromone-binding-proteinâ€“bombykol complex. Chemistry and Biology, 2000, 7, 143-151.	6.0	467
3	Mosquitoes smell and avoid the insect repellent DEET. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 13598-13603.	7.1	251
4	Disulfide structure of the pheromone binding protein from the silkworm moth,Bombyx mori. FEBS Letters, 1999, 464, 85-90.	2.8	235
5	Acute olfactory response of <i>Culex</i> mosquitoes to a human- and bird-derived attractant. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18803-18808.	7.1	235
6	Conformational Change in the Pheromone-binding Protein fromBombyx mori Induced by pH and by Interaction with Membranes. Journal of Biological Chemistry, 1999, 274, 30950-30956.	3.4	234
7	Knockdown of a Mosquito Odorant-binding Protein Involved in the Sensitive Detection of Oviposition Attractants. Journal of Chemical Ecology, 2010, 36, 245-248.	1.8	197
8	Kinetics and molecular properties of pheromone binding and release. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5386-5391.	7.1	177
9	From The Cover: Rapid inactivation of a moth pheromone. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14075-14079.	7.1	172
10	Zika virus replication in the mosquito <i>Culex quinquefasciatus</i> in Brazil. Emerging Microbes and Infections, 2017, 6, 1-11.	6.5	150
11	The crystal structure of an odorant binding protein from Anopheles gambiae: Evidence for a common ligand release mechanism. Biochemical and Biophysical Research Communications, 2006, 339, 157-164.	2.1	149
12	Reverse and Conventional Chemical Ecology Approaches for the Development of Oviposition Attractants for Culex Mosquitoes. PLoS ONE, 2008, 3, e3045.	2.5	147
13	Mosquito odorant receptor for DEET and methyl jasmonate. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16592-16597.	7.1	145
14	Pheromone reception in fruit flies expressing a moth's odorant receptor. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16538-16543.	7.1	140
15	Green leaf volatileâ€detecting olfactory receptor neurones display very high sensitivity and specificity in a scarab beetle. Physiological Entomology, 1999, 24, 121-126.	1.5	129
16	An Odorant Receptor from the Southern House Mosquito Culex pipiens quinquefasciatus Sensitive to Oviposition Attractants. PLoS ONE, 2010, 5, e10090.	2.5	124
17	Pheromone anosmia in a scarab beetle induced by in vivo inhibition of a pheromone-degrading enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11459-11464.	7.1	120
18	Crystal and solution structures of an odorant-binding protein from the southern house mosquito complexed with an oviposition pheromone. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19102-19107.	7.1	116

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19	Structure of an Odorant-Binding Protein from the Mosquito Aedes aegypti Suggests a Binding Pocket Covered by a pH-Sensitive â€œLidâ€. PLoS ONE, 2009, 4, e8006.	2.5	108
20	The enigmatic reception of DEET â€” the gold standard of insect repellents. Current Opinion in Insect Science, 2014, 6, 93-98.	4.4	102
21	Differential expression of olfactory genes in the southern house mosquito and insights into unique odorant receptor gene isoforms. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18704-18709.	7.1	100
22	Chiral discrimination of the Japanese beetle sex pheromone and a behavioral antagonist by a pheromone-degrading enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9076-9080.	7.1	92
23	NMR structure of the unliganded Bombyx mori pheromone-binding protein at physiological pH. FEBS Letters, 2002, 531, 314-318.	2.8	91
24	Maxillary Palps Are Broad Spectrum Odorant Detectors in Culex quinquefasciatus. Chemical Senses, 2007, 32, 727-738.	2.0	91
25	Genome Analysis and Expression Patterns of Odorant-Binding Proteins from the Southern House Mosquito Culex pipiens quinquefasciatus. PLoS ONE, 2009, 4, e6237.	2.5	89
26	Coil-to-helix transition and ligand release of Bombyx mori pheromone-binding protein. Biochemical and Biophysical Research Communications, 2005, 335, 1044-1050.	2.1	86
27	Bombyx mori Pheromone-Binding Protein Binding Nonpheromone Ligands: Implications for Pheromone Recognition. Structure, 2007, 15, 1148-1154.	3.3	86
28	Structural Basis of Ligand Binding and Release in Insect Pheromone-binding Proteins: NMR Structure of Antheraea polyphemus PBP1 at pH 4.5. Journal of Molecular Biology, 2007, 373, 811-819.	4.2	84
29	Odorant Receptor from the Southern House Mosquito Narrowly Tuned to the Oviposition Attractant Skatole. Journal of Chemical Ecology, 2010, 36, 797-800.	1.8	80
30	Cloning of putative odorant-degrading enzyme and integumental esterase cDNAs from the wild silkmoth, Antheraea polyphemus. Insect Biochemistry and Molecular Biology, 2002, 32, 1775-1780.	2.7	77
31	Olfactory receptor neurons detecting plant odours and male volatiles in Anomala cuprea beetles (Coleoptera: Scarabaeidae). Journal of Insect Physiology, 2001, 47, 1065-1076.	2.0	73
32	Peripheral coding of sex pheromone and a behavioral antagonist in the Japanese beetle, Popillia japonica. Journal of Chemical Ecology, 2002, 28, 1075-1089.	1.8	73
33	Reverse chemical ecology approach for the identification of an oviposition attractant for <i>Culex quinquefasciatus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 714-719.	7.1	70
34	Selective and pH-Dependent Binding of a Moth Pheromone to a Pheromone-Binding Protein. Journal of Chemical Ecology, 2005, 31, 2493-2499.	1.8	69
35	Bombykol receptors in the silkworm moth and the fruit fly. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9436-9439.	7.1	65
36	NMR Structure of Navel Orangeworm Moth Pheromone-Binding Protein (AtraPBP1): Implications for pH-Sensitive Pheromone Detection[,]. Biochemistry, 2010, 49, 1469-1476.	2.5	62

#	ARTICLE	IF	CITATIONS
37	Unusual periodicity of sex pheromone production in the large black chaferHolotrichia parallela. Journal of Chemical Ecology, 1993, 19, 1381-1391.	1.8	61
38	Fatty Acid Solubilizer from the Oral Disk of the Blowfly. PLoS ONE, 2013, 8, e51779.	2.5	61
39	Pheromone Discrimination by the Pheromone-Binding Protein of Bombyx mori. Structure, 2006, 14, 1577-1586.	3.3	60
40	Silencing the odorant receptor co-receptor RproOrco affects the physiology and behavior of the Chagas disease vector Rhodnius prolixus. Insect Biochemistry and Molecular Biology, 2016, 69, 82-90.	2.7	60
41	Protein that makes sense in the Argentine ant. Die Naturwissenschaften, 2002, 89, 505-507.	1.6	59
42	Pheromone discrimination by a pH-tuned polymorphism of the <i>Bombyx mori</i> pheromone-binding protein. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18680-18685.	7.1	59
43	Identification and cloning of a female antenna-specific odorant-binding protein in the mosquito Culex quinquefasciatus. Journal of Chemical Ecology, 2002, 28, 867-871.	1.8	58
44	Characterization of olfactory genes in the antennae of the Southern house mosquito, Culex quinquefasciatus. Journal of Insect Physiology, 2011, 57, 915-929.	2.0	57
45	Olfactory Proteins Mediating Chemical Communication in the Navel Orangeworm Moth, Amyelois transitella. PLoS ONE, 2009, 4, e7235.	2.5	54
46	Pheromone Reception. Topics in Current Chemistry, 0, , 1-36.	4.0	52
47	Pheromone Binding to General Odorant-binding Proteins from the Navel Orangeworm. Journal of Chemical Ecology, 2010, 36, 787-794.	1.8	50
48	Conserved Odorant-Binding Proteins from Aphids and Eavesdropping Predators. PLoS ONE, 2011, 6, e23608.	2.5	47
49	Reverse chemical ecology at the service of conservation biology. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12094-12096.	7.1	47
50	1-Octen-3-ol â€“ the attractant that repels. F1000Research, 2015, 4, 156.	1.6	47
51	RNAi-based demonstration of direct link between specific odorant receptors and mosquito oviposition behavior. Insect Biochemistry and Molecular Biology, 2013, 43, 916-923.	2.7	46
52	Identification and Characterization of an Antennae-Specific Aldehyde Oxidase from the Navel Orangeworm. PLoS ONE, 2013, 8, e67794.	2.5	46
53	Crystallographic Observation of pH-Induced Conformational Changes in the Amyelois transitella Pheromone-Binding Protein AtraPBP1. PLoS ONE, 2013, 8, e53840.	2.5	43
54	Odorant-Binding Proteins of the Malaria Mosquito Anopheles funestus sensu stricto. PLoS ONE, 2010, 5, e15403.	2.5	42

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55	Chemical Ecology of Animal and Human Pathogen Vectors in a Changing Global Climate. Journal of Chemical Ecology, 2010, 36, 113-121.	1.8	41
56	Probing insect odorant receptors with their cognate ligands: Insights into structural features. Biochemical and Biophysical Research Communications, 2013, 435, 477-482.	2.1	39
57	Proteins that make sense. , 2003, , 447-476.		39
58	Moth Sex Pheromone Receptors and Deceitful Parapheromones. PLoS ONE, 2012, 7, e41653.	2.5	38
59	Selectivity of odorant-binding proteins from the southern house mosquito tested against physiologically relevant ligands. Frontiers in Physiology, 2015, 6, 56.	2.8	37
60	Putative sex pheromone of the Asian citrus psyllid, Diaphorina citri, breaks down into an attractant. Scientific Reports, 2018, 8, 455.	3.3	37
61	Identification, Synthesis, and Field Evaluation of the Sex Pheromone from the Citrus Leafminer, Phyllocnistis citrella. Journal of Chemical Ecology, 2006, 32, 155-168.	1.8	34
62	Molecular switches for pheromone release from a moth pheromone-binding protein. Biochemical and Biophysical Research Communications, 2008, 372, 559-564.	2.1	34
63	Extrusion of the C-terminal helix in navel orangeworm moth pheromone-binding protein (AtraPBP1) controls pheromone binding. Biochemical and Biophysical Research Communications, 2011, 404, 335-338.	2.1	34
64	The scarab beetleAnomala cuprea utilizes the sex pheromone ofPopillia japonica as a minor component. Journal of Chemical Ecology, 1993, 19, 1303-1313.	1.8	31
65	Use of machine learning to identify novel, behaviorally active antagonists of the insect odorant receptor co-receptor (Orco) subunit. Scientific Reports, 2019, 9, 4055.	3.3	31
66	Specificity Determinants of the Silkworm Moth Sex Pheromone. PLoS ONE, 2012, 7, e44190.	2.5	31
67	Reverse chemical ecology-based approach leading to the accidental discovery of repellents for Rhodnius prolixus, a vector of Chagas diseases refractory to DEET. Insect Biochemistry and Molecular Biology, 2018, 103, 46-52.	2.7	30
68	Dynamic Conformational Equilibria in the Physiological Function of the Bombyx mori Pheromone-Binding Protein. Journal of Molecular Biology, 2011, 408, 922-931.	4.2	29
69	Generic Insect Repellent Detector from the Fruit Fly Drosophila melanogaster. PLoS ONE, 2011, 6, e17705.	2.5	29
70	Does Zika virus infection affect mosquito response to repellents?. Scientific Reports, 2017, 7, 42826.	3.3	28
71	Silent, generic and plant kairomone sensitive odorant receptors from the Southern house mosquito. Journal of Insect Physiology, 2013, 59, 961-966.	2.0	27
72	Binding of a fluorescence reporter and a ligand to an odorant-binding protein of the yellow fever mosquito, Aedes aegypti. F1000Research, 2014, 3, 305.	1.6	27

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73	GP-9s Are Ubiquitous Proteins Unlikely Involved in Olfactory Mediation of Social Organization in the Red Imported Fire Ant, Solenopsis invicta. PLoS ONE, 2008, 3, e3762.	2.5	27
74	Odorant-binding proteins from a primitive termite. Journal of Chemical Ecology, 2002, 28, 1887-1893.	1.8	26
75	Identification, synthesis, and field evaluation of the sex pheromone of the citrus fruit borer Ecdytolopha aurantiana. Journal of Chemical Ecology, 2001, 27, 2041-2051.	1.8	25
76	Functional Characterization of Odorant Binding Protein 27 (RproOBP27) From Rhodnius prolixus Antennae. Frontiers in Physiology, 2018, 9, 1175.	2.8	25
77	Odorant receptor-based discovery of natural repellents of human lice. Insect Biochemistry and Molecular Biology, 2015, 66, 103-109.	2.7	24
78	Fungal phytopathogen modulates plant and insect responses to promote its dissemination. ISME Journal, 2021, 15, 3522-3533.	9.8	24
79	CO2 per se activates carbon dioxide receptors. Insect Biochemistry and Molecular Biology, 2020, 117, 103284.	2.7	23
80	Binding of a fluorescence reporter and a ligand to an odorant-binding protein of the yellow fever mosquito, Aedes aegypti. F1000Research, 2014, 3, 305.	1.6	23
81	Intriguing olfactory proteins from the yellow fever mosquito, Aedes aegypti. Die Naturwissenschaften, 2004, 91, 426-31.	1.6	22
82	Oviposition Responses of Gravid Female Culex quinquefasciatus to Egg Rafts and Low Doses of Oviposition Pheromone Under Semifield Conditions. Journal of Chemical Ecology, 2007, 33, 567-578.	1.8	21
83	Proteomic analysis of the kissing bug Rhodnius prolixus antenna. Journal of Insect Physiology, 2017, 100, 108-118.	2.0	21
84	Odorant Inhibition in Mosquito Olfaction. IScience, 2019, 19, 25-38.	4.1	20
85	Multitasking roles of mosquito labrum in oviposition and blood feeding. Frontiers in Physiology, 2015, 6, 306.	2.8	19
86	Toxic Effect of Blood Feeding in Male Mosquitoes. Frontiers in Physiology, 2016, 7, 4.	2.8	19
87	Attraction of Culex mosquitoes to aldehydes from human emanations. Scientific Reports, 2017, 7, 17965.	3.3	19
88	DEET and other repellents are inhibitors of mosquito odorant receptors for oviposition attractants. Insect Biochemistry and Molecular Biology, 2019, 113, 103224.	2.7	19
89	Evaluation of an oviposition-stimulating kairomone for the yellow fever mosquito, Aedes aegypti, in Recife, Brazil. Journal of Vector Ecology, 2010, 35, 204-207.	1.0	18
90	Odorant receptors from Culex quinquefasciatus and Aedes aegypti sensitive to floral compounds. Insect Biochemistry and Molecular Biology, 2019, 113, 103213.	2.7	18

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91	Sexual behavior and diel activity of citrus fruit borer Ecdytolopha aurantiana. Journal of Chemical Ecology, 2001, 27, 2053-2065.	1.8	17
92	Sex pheromone of the scarab beetle Phyllophaga elenans and some intriguing minor components. Journal of Chemical Ecology, 2003, 29, 15-25.	1.8	17
93	Culex Mosquitoes (Diptera: Culicidae) Egg Laying in Traps Loaded With Bacillus thuringiensis Variety israelensis and Baited With Skatole. Journal of Medical Entomology, 2010, 47, 345-348.	1.8	17
94	Sexual behavior of the navel OrangeWorm, Amyelois transitella (Walker) (Lepidoptera: Pyralidae). Neotropical Entomology, 2006, 35, 769-776.	1.2	16
95	Facile functional analysis of insect odorant receptors expressed in the fruit fly: validation with receptors from taxonomically distant and closely related species. Cellular and Molecular Life Sciences, 2014, 71, 4675-4680.	5.4	16
96	DEET as a feeding deterrent. PLoS ONE, 2017, 12, e0189243.	2.5	16
97	Methyl dihydrojasmonate and lilial are the constituents with an "off-label" insect repellence in perfumes. PLoS ONE, 2018, 13, e0199386.	2.5	16
98	Characterization of antennal sensilla, larvae morphology and olfactory genes of Melipona scutellaris stingless bee. PLoS ONE, 2017, 12, e0174857.	2.5	16
99	Laboratory and field evaluation of acetic acid-based lures for male Asian citrus psyllid, Diaphorina citri. Scientific Reports, 2019, 9, 12920.	3.3	15
100	<I>Culex</I> Mosquitoes (Diptera: Culicidae) Egg Laying in Traps Loaded With <I>Bacillus thuringiensis</I> Variety <I>israelensis</I> and Baited With Skatole. Journal of Medical Entomology, 2010, 47, 345-348.	1.8	14
101	Identification of the sex pheromone of Phyllophaga cuyabana (Coleoptera: Melolonthidae). Tetrahedron Letters, 2007, 48, 1991-1992.	1.4	13
102	The treacherous scent of a human. Nature, 2010, 464, 37-38.	27.8	12
103	How much is a pheromone worth?. F1000Research, 2016, 5, 1763.	1.6	11
104	1H, 15N, and 13C chemical shift assignments of the mosquito odorant binding protein-1 (CquiOBP1) bound to the mosquito oviposition pheromone. Biomolecular NMR Assignments, 2009, 3, 195-197.	0.8	10
105	Deciphering the Rosetta Stone of Insect Chemical Communication. American Entomologist, 2014, 60, 223-230.	0.2	8
106	Functional and Nonfunctional Forms of CquiOR91, an Odorant Selectivity Subunit of Culex quinquefasciatus. Chemical Senses, 2017, 42, 333-341.	2.0	8
107	Trapping of Phyllophaga elenans with a female-produced pheromone. Journal of Chemical Ecology, 2003, 29, 27-36.	1.8	7
108	Zika mosquito vectors: the jury is still out. F1000Research, 2016, 5, 2546.	1.6	7

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109	Synthesis of an immobilized Bombyx mori pheromone-binding protein liquid chromatography stationary phase. Talanta, 2006, 70, 752-755.	5.5	6
110	Towards the identification and synthesis of the sex pheromone of the citrus leafminer, Phyllocnistis citrella Stainton (Lepidoptera: Gracillariidae). Neotropical Entomology, 2006, 35, 12-18.	1.2	6
111	Electrophysiological Measurements from a Moth Olfactory System. Journal of Visualized Experiments, 2011, , .	0.3	6
112	Quasi-Double-Blind Screening of Semiochemicals for Reducing Navel Orangeworm Oviposition on Almonds. PLoS ONE, 2013, 8, e80182.	2.5	6
113	Alternative splicing produces two transcripts encoding female-biased pheromone subfamily receptors in the navel orangeworm, Amyelois transitella. Frontiers in Ecology and Evolution, 2015, 3, .	2.2	6
114	(3S,6E)-nerolidol-mediated rendezvous of Cyclocephala paraguayensis beetles in bottle gourd flowers. PLoS ONE, 2020, 15, e0235028.	2.5	6
115	Odorant-Binding Protein from Culex tarsalis, the Most Competent Vector of West Nile Virus in California. Journal of Asia-Pacific Entomology, 2003, 6, 45-48.	0.9	5
116	Healing power of honey. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8763-8764.	7.1	5
117	Conspecific and allospecific larval extracts entice mosquitoes to lay eggs and may be used in attract-and-kill control strategy. Scientific Reports, 2019, 9, 13747.	3.3	5
118	A popular Indian clove-based mosquito repellent is less effective against Culex quinquefasciatus and Aedes aegypti than DEET. PLoS ONE, 2019, 14, e0224810.	2.5	5
119	Molecular-Based Chemical Prospecting of Mosquito Attractants and Repellents. , 2006, , 229-242.		5
120	Brazilian Cerrado biome essential oils to control the arbovirus vectors Aedes aegypti and Culex quinquefasciatus. Industrial Crops and Products, 2022, 178, 114568.	5.2	5
121	<i>Colletotrichum falcatum</i> modulates the olfactory behavior of the sugarcane borer, favoring pathogen infection. FEMS Microbiology Ecology, 2022, , .	2.7	5
122	Mosquito odorant receptor sensitive to natural spatial repellents and inhibitory compounds. Insect Biochemistry and Molecular Biology, 2022, 144, 103763.	2.7	5
123	Molecules as Biotic Messengers. ACS Omega, 2018, 3, 4048-4053.	3.5	4
124	1H, 15N, and 13C Chemical shift assignments of the navel orange worm pheromone-binding protein-1 (Atra-PBP1). Biomolecular NMR Assignments, 2008, 2, 105-106.	0.8	3
125	Snapshot of insectâ€“fungus arms race. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8519-8520.	7.1	3
126	An unsettling explanation for the failure of skatoleâ€baited ovitraps to capture Culex mosquitoes. Insect Science, 2019, 26, 873-880.	3.0	3

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127	Mechanism of Action of Insect Pheromones and Other Semiochemicals. , 2020, , 222-236.		3
128	Odorant inhibition in mosquito olfaction mediated by inverse agonists. Biochemical and Biophysical Research Communications, 2022, 609, 156-162.	2.1	2
129	Potentially Hygroreceptive Sensilla on the Anal Stylus of the Glassy-Winged Sharpshooter,Homalodisca vitripennis. Journal of Insect Science, 2008, 8, 1-6.	1.5	0
130	Peripheral, Intrareceptor Inhibition in Mosquito Olfaction. SSRN Electronic Journal, 0, , .	0.4	0