Richard D Newcomb

List of Publications by Year
in descending order

106 papers	6,536 citations	76294 40 h-index	69214 77 g-index
110 all docs	110 docs citations	110 times ranked	7195 citing authors

#	Article	IF	Citations
1	DAD2 Is an Î±/Î² Hydrolase Likely to Be Involved in the Perception of the Plant Branching Hormone, Strigolactone. Current Biology, 2012, 22, 2032-2036.	1.8	571
2	A single amino acid substitution converts a carboxylesterase to an organophosphorus hydrolase and confers insecticide resistance on a blowfly. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7464-7468.	3.3	340
3	A Genomics Approach Reveals That Aroma Production in Apple Is Controlled by Ethylene Predominantly at the Final Step in Each Biosynthetic Pathway. Plant Physiology, 2007, 144, 1899-1912.	2.3	317
4	RNA interference in the light brown apple moth, Epiphyas postvittana (Walker) induced by double-stranded RNA feeding. Insect Molecular Biology, 2006, 15, 383-391.	1.0	305
5	Drosophila odorant receptors are novel seven transmembrane domain proteins that can signal independently of heterotrimeric G proteins. Insect Biochemistry and Molecular Biology, 2008, 38, 770-780.	1.2	262
6	Analyses of Expressed Sequence Tags from Apple. Plant Physiology, 2006, 141, 147-166.	2.3	246
7	Analysis of expressed sequence tags from Actinidia: applications of a cross species EST database for gene discovery in the areas of flavor, health, color and ripening. BMC Genomics, 2008, 9, 351.	1.2	178
8	A Mendelian Trait for Olfactory Sensitivity Affects Odor Experience and Food Selection. Current Biology, 2013, 23, 1601-1605.	1.8	164
9	Female-biased expression of odourant receptor genes in the adult antennae of the silkworm, Bombyx mori. Insect Molecular Biology, 2007, 16, 107-119.	1.0	159
10	An alcohol acyl transferase from apple (cv. Royal Gala), MpAAT1, produces esters involved in apple fruit flavor. FEBS Journal, 2005, 272, 3132-3144.	2.2	150
11	Amplification of DNA from preserved specimens shows blowflies were preadapted for the rapid evolution of insecticide resistance. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 8757-8762.	3.3	149
12	Insect olfaction and the evolution of receptor tuning. Frontiers in Ecology and Evolution, 2015, 3, .	1.1	139
13	Two different amino acid substitutions in the ali-esterase, E3, confer alternative types of organophosphorus insecticide resistance in the sheep blowfly, Lucilia cuprina. Insect Biochemistry and Molecular Biology, 1998, 28, 139-150.	1.2	126
14	Molecular basis of female-specific odorant responses in Bombyx mori. Insect Biochemistry and Molecular Biology, 2009, 39, 189-197.	1.2	124
15	Evaluating a multigene environmental DNA approach for biodiversity assessment. GigaScience, 2015, 4, 46.	3.3	122
16	Genetic Variation in the Odorant Receptor OR2J3 Is Associated with the Ability to Detect the â€œGrassyâ€• Smelling Odor, cis-3-hexen-1-ol. Chemical Senses, 2012, 37, 585-593.	1.1	110
17	The acetylcholinesterase gene and organophosphorus resistance in the Australian sheep blowfly, Lucilia cuprina. Insect Biochemistry and Molecular Biology, 2001, 31, 805-816.	1.2	109
18	Niche construction initiates the evolution of mutualistic interactions. Ecology Letters, 2014, 17, 1257-1264.	3.0	109

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19	The tuatara genome reveals ancient features of amniote evolution. Nature, 2020, 584, 403-409.	13.7	105
20	The Carboxylesterase Gene Family from Arabidopsis thaliana. Journal of Molecular Evolution, 2003, 57, 487-500.	0.8	104
21	Odorant Receptors from the Light brown Apple Moth (Epiphyas postvittana) Recognize Important Volatile Compounds Produced by Plants. Chemical Senses, 2009, 34, 383-394.	1.1	104
22	Identification of Regions Associated with Variation in Sensitivity to Food-Related Odors in the Human Genome. Current Biology, 2013, 23, 1596-1600.	1.8	93
23	Quantifying Variation in the Ability of Yeasts to Attract Drosophila melanogaster. PLoS ONE, 2013, 8, e75332.	1.1	89
24	Advances in the Identification and Characterization of Olfactory Receptors in Insects. Progress in Molecular Biology and Translational Science, 2015, 130, 55-80.	0.9	78
25	Sucrose Phosphate Synthase Genes in Plants Belong to Three Different Families. Journal of Molecular Evolution, 2002, 54, 322-332.	0.8	76
26	Functional analysis of a Drosophila melanogaster olfactory receptor expressed in Sf9 cells. Journal of Neuroscience Methods, 2007, 159, 189-194.	1.3	71
27	Towards an understanding of the structural basis for insect olfaction by odorant receptors. Insect Biochemistry and Molecular Biology, 2015, 66, 31-41.	1.2	69
28	Odor memories regulate olfactory receptor expression in the sensory periphery. European Journal of Neuroscience, 2014, 39, 1642-1654.	1.2	68
29	The potential for the use of gene drives for pest control in New Zealand: a perspective. Journal of the Royal Society of New Zealand, 2018, 48, 225-244.	1.0	66
30	cDNA cloning, baculovirus-expression and kinetic properties of the esterase, E3, involved in organophosphorus resistance in Lucilia cuprina. Insect Biochemistry and Molecular Biology, 1997, 27, 15-25.	1.2	64
31	Impacts of DNA extraction and PCR on DNA metabarcoding estimates of soil biodiversity. Methods in Ecology and Evolution, 2019, 10, 120-133.	2.2	62
32	Insights into subunit interactions within the insect olfactory receptor complex using FRET. Insect Biochemistry and Molecular Biology, 2013, 43, 138-145.	1.2	61
33	Characterization of Odorant Receptors from a Non-ditrysian Moth, Eriocrania semipurpurella Sheds Light on the Origin of Sex Pheromone Receptors in Lepidoptera. Molecular Biology and Evolution, 2017, 34, 2733-2746.	3.5	59
34	High-Resolution Crystal Structure of Plant Carboxylesterase AeCXE1, from Actinidia eriantha, and Its Complex with a High-Affinity Inhibitor Paraoxon,. Biochemistry, 2007, 46, 1851-1859.	1.2	58
35	The Peripheral Olfactory Repertoire of the Lightbrown Apple Moth, Epiphyas postvittana. PLoS ONE, 2015, 10, e0128596.	1.1	57
36	Expressed sequence tags and proteomics of antennae from the tortricid moth, <i>Epiphyas postvittana</i>. Insect Molecular Biology, 2008, 17, 361-373.	1.0	55

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37	Sex Pheromone Evolution Is Associated with Differential Regulation of the Same Desaturase Gene in Two Genera of Leafroller Moths. PLoS Genetics, 2012, 8, e1002489.	1.5	55
38	Characterisation of two alcohol acyltransferases from kiwifruit (Actinidia spp.) reveals distinct substrate preferences. Phytochemistry, 2011, 72, 700-710.	1.4	53
39	Multiple Mutations and Gene Duplications Conferring Organophosphorus Insecticide Resistance Have Been Selected at the Rop-1 Locus of the Sheep Blowfly, Lucilia cuprina. Journal of Molecular Evolution, 2005, 60, 207-220.	0.8	52
40	A novel method to study insect olfactory receptor function using HEK293Âcells. Insect Biochemistry and Molecular Biology, 2014, 54, 22-32.	1.2	50
41	Expressed sequence tags from the midgut of <i>Epiphyas postvittana</i> (Walker) (Lepidoptera:) Tj ETQq1 1 0.784314 rgBT /Overlock	1.0	42
42	Crystal Structure of Epiphyas postvittana Takeout 1 with Bound Ubiquinone Supports a Role as Ligand Carriers for Takeout Proteins in Insects. Journal of Biological Chemistry, 2009, 284, 3496-3503.	1.6	40
43	A preliminary investigation into a genetic basis for cis-3-hexen-1-ol odour perception: A genome-wide association approach. Food Quality and Preference, 2010, 21, 121-131.	2.3	40
44	Title is missing!. European Journal of Plant Pathology, 1998, 104, 619-623.	0.8	38
45	A Conserved Aspartic Acid Is Important for Agonist (VUAA1) and Odorant/Tuning Receptor-Dependent Activation of the Insect Odorant Co-Receptor (Orco). PLoS ONE, 2013, 8, e70218.	1.1	38
46	A Sex Pheromone Receptor in the Hessian Fly Mayetiola destructor (Diptera, Cecidomyiidae). Frontiers in Cellular Neuroscience, 2016, 10, 212.	1.8	38
47	Divergent transcriptional responses to low temperature among populations of alpine and lowland species of <scp>N</scp>ew <scp>Z</scp>ealand stick insects (<i><scp>M</scp>icrarchus</i>). Molecular Ecology, 2014, 23, 2712-2726.	2.0	37
48	Estimating the biodiversity of terrestrial invertebrates on a forested island using DNA barcodes and metabarcoding data. Ecological Applications, 2019, 29, e01877.	1.8	37
49	Pheromone Receptor Evolution in the Cryptic Leafroller Species, Ctenopseustis obliquana and C. herana. Journal of Molecular Evolution, 2015, 80, 42-56.	0.8	36
50	Molecular cloning of an Î±-esterase gene cluster on chromosome 3R of Drosophila melanogaster. Insect Biochemistry and Molecular Biology, 1996, 26, 235-247.	1.2	35
51	Pernin: a novel, self-aggregating haemolymph protein from the New Zealand green-lipped mussel, Perna canaliculus (Bivalvia: Mytilidae). Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2001, 128, 767-779.	0.7	35
52	Characteristics associated with Woolly Apple Aphid Eriosoma lanigerum , resistance of three apple rootstocks. Entomologia Experimentalis Et Applicata, 2003, 109, 63-72.	0.7	33
53	Analysis of the circadian clock gene period in the sheep blow fly Lucilia cuprina. Genetical Research, 2000, 75, 257-267.	0.3	32
54	Identification of cold-responsive genes in a New Zealand alpine stick insect using RNA-Seq. Comparative Biochemistry and Physiology Part D: Genomics and Proteomics, 2013, 8, 24-31.	0.4	32

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55	A Novel Fatty Acyl Desaturase from the Pheromone Glands of Ctenopseustis obliquana and C. herana with Specific Z5-Desaturase Activity on Myristic Acid. Journal of Chemical Ecology, 2014, 40, 63-70.	0.9	32
56	Pheromone evolution within the genera Ctenopseustis and Planotortrix (Lepidoptera: Tortricidae) inferred from a phylogeny based on cytochrome oxidase I gene variation. Biochemical Systematics and Ecology, 1998, 26, 473-484.	0.6	31
57	Recombinant expression, detergent solubilisation and purification of insect odorant receptor subunits. Protein Expression and Purification, 2013, 90, 160-169.	0.6	31
58	Isolation of a cluster esterase genes associated with organophosphate resistance in Lucilia cuprina. Insect Molecular Biology, 1996, 5, 211-216.	1.0	28
59	Biochemical characterisation of MdCXE1, a carboxylesterase from apple that is expressed during fruit ripening. Phytochemistry, 2011, 72, 564-571.	1.4	28
60	Analysis of the genome of the New Zealand giant collembolan (Holacanthella duospinosa) sheds light on hexapod evolution. BMC Genomics, 2017, 18, 795.	1.2	28
61	Assessing genome assembly quality prior to downstream analysis: N50 versus BUSCO. Molecular Ecology Resources, 2021, 21, 1416-1421.	2.2	28
62	Binding of Bacillus thuringiensis Î´-endotoxins Cry1Ac and Cry1Ba to a 120-kDa aminopeptidase-N of Epiphyas postvittana purified from both brush border membrane vesicles and baculovirus-infected Sf9 cells. Insect Biochemistry and Molecular Biology, 2000, 30, 1069-1078.	1.2	27
63	Selective Pressures on Drosophila Chemosensory Receptor Genes. Journal of Molecular Evolution, 2007, 64, 628-636.	0.8	26
64	Positive selection in glycolysis among Australasian stick insects. BMC Evolutionary Biology, 2013, 13, 215.	3.2	25
65	Mutational Analysis of Cysteine Residues of the Insect Odorant Co-receptor (Orco) from Drosophila melanogaster Reveals Differential Effects on Agonist- and Odorant-tuning Receptor-dependent Activation. Journal of Biological Chemistry, 2014, 289, 31837-31845.	1.6	25
66	Pest Control Compounds Targeting Insect Chemoreceptors: Another Silent Spring?. Frontiers in Ecology and Evolution, 2017, 5, .	1.1	23
67	Pheromone binding proteins of Epiphyas postvittana (Lepidoptera: Tortricidae) are encoded at a single locus. Insect Biochemistry and Molecular Biology, 2002, 32, 1543-1554.	1.2	22
68	Heritable differences in chemosensory ability among humans. Flavour, 2012, 1, .	2.3	22
69	Multilayer Perceptron Classification of Unknown Volatile Chemicals from the Firing Rates of Insect Olfactory Sensory Neurons and Its Application to Biosensor Design. Neural Computation, 2013, 25, 259-287.	1.3	21
70	Assembling large genomes: analysis of the stick insect (Clitarchus hookeri) genome reveals a high repeat content and sex-biased genes associated with reproduction. BMC Genomics, 2017, 18, 884.	1.2	21
71	Phylogenetic Analysis of â€œCandidatus Phytoplasma australienseâ€•Reveals Distinct Populations in New Zealand. Phytopathology, 2006, 96, 838-845.	1.1	19
72	DNA barcoding of the endemic New Zealand leafroller moth genera, <i>Ctenopseustis</i> and <i>Planotortrix</i>. Molecular Ecology Resources, 2009, 9, 691-698.	2.2	19

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73	Flexibility of the petunia strigolactone receptor DAD2 promotes its interaction with signaling partners. Journal of Biological Chemistry, 2020, 295, 4181-4193.	1.6	19
74	Patterns of Mitochondrial Haplotype Diversity in the Invasive Pest Epiphyas postvittana (Lepidoptera:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.8	18
75	De Novo Transcriptome Analysis of the Common New Zealand Stick Insect Clitarchus hookeri (Phasmatodea) Reveals Genes Involved in Olfaction, Digestion and Sexual Reproduction. PLoS ONE, 2016, 11, e0157783.	1.1	18
76	Differential gene expression in the evolution of sex pheromone communication in New Zealandâ€™s endemic leafroller moths of the genera Ctenopseustis and Planotortrix. BMC Genomics, 2018, 19, 94.	1.2	18
77	DNA Diagnostics of Three Armored Scale Species on Kiwifruit in New Zealand. Journal of Economic Entomology, 2008, 101, 1944-1949.	0.8	17
78	Investigation of the impact of sensitivity to cis-3-hexen-1-ol (green/grassy) on food acceptability and selection. Food Quality and Preference, 2012, 24, 230-242.	2.3	17
79	Odorant Receptors of the New Zealand Endemic Leafroller Moth Species Planotortrix octo and P. excessana. PLoS ONE, 2016, 11, e0152147.	1.1	17
80	Selective Sweeps at the Organophosphorus Insecticide Resistance Locus, Rop-1, Have Affected Variation across and beyond the Â-Esterase Gene Cluster in the Australian Sheep Blowfly, Lucilia cuprina. Molecular Biology and Evolution, 2011, 28, 1835-1846.	3.5	16
81	A novel Î±-amylase gene is transiently upregulated during low temperature exposure in apple fruit. FEBS Journal, 2000, 267, 1313-1322.	0.2	15
82	The phylogenetic position of the New Zealand batfly,<i>Mystacinobia zelandica</i>(Mystacinobiidae;) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Society of New Zealand, 2000, 30, 155-168.	1.0	15
83	Sex pheromone receptors of the light brown apple moth, Epiphyas postvittana, support a second major pheromone receptor clade within the Lepidoptera. Insect Biochemistry and Molecular Biology, 2022, 141, 103708.	1.2	15
84	The Context of Chemical Communication Driving a Mutualism. Journal of Chemical Ecology, 2015, 41, 929-936.	0.9	14
85	Sequence Comparisons of Odorant Receptors among Tortricid Moths Reveal Different Rates of Molecular Evolution among Family Members. PLoS ONE, 2012, 7, e38391.	1.1	13
86	A PCR-directed cell-free approach to optimize protein expression using diverse fusion tags. Protein Expression and Purification, 2011, 80, 117-124.	0.6	12
87	Using artificial neural networks to classify unknown volatile chemicals from the firings of insect olfactory sensory neurons. , 2011, 2011, 2752-5.		12
88	Ligand promiscuity within the internal cavity of Epiphyas postvittana Takeout 1 protein. Journal of Structural Biology, 2013, 182, 259-263.	1.3	12
89	The Evolution of Desaturase Gene Regulation Involved in Sex Pheromone Production in Leafroller Moths of the Genus Planotortrix. Journal of Heredity, 2013, 104, 627-638.	1.0	12
90	The Squash Aspartic Proteinase Inhibitor SQAPI Is Widely Present in the Cucurbitales, Comprises a Small Multigene Family, and Is a Member of the Phytocystatin Family. Journal of Molecular Evolution, 2006, 63, 747-757.	0.8	10

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91	Sensory characterisation of food and beverage stimuli containing Î²-ionone and differences between individuals by genotype for rs6591536. Food Research International, 2014, 62, 205-214.	2.9	9
92	Predicting odorant chemical class from odorant descriptor values with an assembly of multi-layer perceptrons. , 2011, 2011, 2756-9.		8
93	Using Multilayer Perceptron Computation to Discover Ideal Insect Olfactory Receptor Combinations in the Mosquito and Fruit Fly for an Efficient Electronic Nose. Neural Computation, 2015, 27, 171-201.	1.3	7
94	New Zealand Tree and Giant WÄ“tÄ•(Orthoptera) Transcriptomics Reveal Divergent Selection Patterns in Metabolic Loci. Genome Biology and Evolution, 2019, 11, 1293-1306.	1.1	6
95	Application of artificial neural networks on mosquito Olfactory Receptor Neurons for an olfactory biosensor. , 2013, 2013, 5390-3.		5
96	“Super E-Noses”: Multi-layer perceptron classification of volatile odorants from the firing rates of cross-species olfactory receptor arrays. , 2014, 2014, 954-7.		5
97	The Genomics and Population Genomics of the Light Brown Apple Moth, Epiphyas postvittana, an Invasive Tortricid Pest of Horticulture. Insects, 2022, 13, 264.	1.0	5
98	Positive selection and comparative molecular evolution of reproductive proteins from New Zealand tree weta (Orthoptera, Hemideina). PLoS ONE, 2017, 12, e0188147.	1.1	4
99	Genetic variation in taste and odour perception: an emerging science to guide new product development. , 2010, , 570-596.		4
100	The sensitive period for yellow phenocopy induction inDrosophila melanogaster. Experientia, 1988, 44, 618-621.	1.2	3
101	Apple Functional Genomics. , 2009, , 121-142.		3
102	Biochemical Genetics and Genomics of Insect Esterases. , 2019, , .		3
103	Artificial Neural Network prediction of specific VOCs and blended VOCs for various concentrations from the olfactory receptor firing rates of Drosophila melanogaster. , 2014, 2014, 3232-5.		2
104	Improving odorant chemical class prediction with multi-layer perceptrons using temporal odorant spike responses from drosophila melanogaster olfactory receptor neurons. , 2016, 2016, 6393-6396.		1
105	Olfactory genomics and biotechnology in insect control. , 2021, , 645-674.		1
106	Divergent Gene Expression Following Duplication of Meiotic Genes in the Stick Insect Clitarchus hookeri. Genome Biology and Evolution, 2021, 13, .	1.1	1