

Rayko Halitschke

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77
papers

7,465
citations

41
h-index

84
g-index

84
ext. papers

8,500
ext. citations

7.9
avg. IF

5.88
L-index

#	Paper	IF	Citations
77	Volatile signaling in plant-plant interactions: "talking trees" in the genomics era. <i>Science</i> , 2006 , 311, 812-817	33.3	629
76	A knock-out mutation in allene oxide synthase results in male sterility and defective wound signal transduction in Arabidopsis due to a block in jasmonic acid biosynthesis. <i>Plant Journal</i> , 2002 , 31, 1-12	6.9	462
75	Molecular interactions between the specialist herbivore <i>Manduca sexta</i> (Lepidoptera, Sphingidae) and its natural host <i>Nicotiana attenuata</i> . III. Fatty acid-amino acid conjugates in herbivore oral secretions are necessary and sufficient for herbivore-specific plant responses. <i>Plant Physiology</i> , 2001 , 125, 711-7	6.6	445
74	Silencing the jasmonate cascade: induced plant defenses and insect populations. <i>Science</i> , 2004 , 305, 665-668	33.3	432
73	Herbivory in the previous generation primes plants for enhanced insect resistance. <i>Plant Physiology</i> , 2012 , 158, 854-63	6.6	316
72	Nicotine's defensive function in nature. <i>PLoS Biology</i> , 2004 , 2, E217	9.7	313
71	Antisense LOX expression increases herbivore performance by decreasing defense responses and inhibiting growth-related transcriptional reorganization in <i>Nicotiana attenuata</i> . <i>Plant Journal</i> , 2003 , 36, 794-807	6.9	289
70	Priming of plant defense responses in nature by airborne signaling between <i>Artemisia tridentata</i> and <i>Nicotiana attenuata</i> . <i>Oecologia</i> , 2006 , 148, 280-92	2.9	288
69	Agrobacterium-mediated transformation of <i>Nicotiana attenuata</i> , a model ecological expression system. <i>Chemoecology</i> , 2002 , 12, 177-183	2	264
68	Shared signals -alarm calls- from plants increase apparency to herbivores and their enemies in nature. <i>Ecology Letters</i> , 2008 , 11, 24-34	10	208
67	Co(i)-ordinating defenses: NaCO11 mediates herbivore- induced resistance in <i>Nicotiana attenuata</i> and reveals the role of herbivore movement in avoiding defenses. <i>Plant Journal</i> , 2007 , 51, 79-91	6.9	204
66	Constitutive and induced defenses to herbivory in above- and belowground plant tissues. <i>Ecology</i> , 2008 , 89, 392-406	4.6	201
65	Ecophysiological comparison of direct and indirect defenses in <i>Nicotiana attenuata</i> . <i>Oecologia</i> , 2000 , 124, 408-417	2.9	194
64	Testing the potential for conflicting selection on floral chemical traits by pollinators and herbivores: predictions and case study. <i>Functional Ecology</i> , 2009 , 23, 901-912	5.6	171
63	Molecular interactions between the specialist herbivore <i>Manduca sexta</i> (Lepidoptera, Sphingidae) and its natural host <i>Nicotiana attenuata</i> . VI. Microarray analysis reveals that most herbivore-specific transcriptional changes are mediated by fatty acid-amino acid conjugates. <i>Plant Physiology</i> , 2003 , 121, 1894-902	6.6	170
62	Physiological integration of roots and shoots in plant defense strategies links above- and belowground herbivory. <i>Ecology Letters</i> , 2008 , 11, 841-51	10	156
61	Merging molecular and ecological approaches in plant-insect interactions. <i>Current Opinion in Plant Biology</i> , 2001 , 4, 351-8	9.9	153

60	Volatile signaling in plant-plant-herbivore interactions: what is real?. <i>Current Opinion in Plant Biology</i> , 2002 , 5, 351-4	9.9	151
59	Salicylic acid 3-hydroxylase regulates Arabidopsis leaf longevity by mediating salicylic acid catabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 14807-12	11.5	148
58	Silencing of hydroperoxide lyase and allene oxide synthase reveals substrate and defense signaling crosstalk in <i>Nicotiana attenuata</i> . <i>Plant Journal</i> , 2004 , 40, 35-46	6.9	133
57	Herbivory-mediated pollinator limitation: negative impacts of induced volatiles on plant-pollinator interactions. <i>Ecology</i> , 2011 , 92, 1769-80	4.6	127
56	Using SmutePlants to translate volatile signals. <i>Plant Journal</i> , 2006 , 45, 275-91	6.9	126
55	Salicylate-mediated interactions between pathogens and herbivores. <i>Ecology</i> , 2010 , 91, 1075-82	4.6	119
54	Tuning the herbivore-induced ethylene burst: the role of transcript accumulation and ethylene perception in <i>Nicotiana attenuata</i> . <i>Plant Journal</i> , 2007 , 51, 293-307	6.9	119
53	Specificity and complexity: the impact of herbivore-induced plant responses on arthropod community structure. <i>Current Opinion in Plant Biology</i> , 2007 , 10, 409-14	9.9	116
52	Independently silencing two JAR family members impairs levels of trypsin proteinase inhibitors but not nicotine. <i>Planta</i> , 2007 , 226, 159-67	4.7	113
51	Evidence for adaptive radiation from a phylogenetic study of plant defenses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 18067-72	11.5	111
50	Evolutionary trade-offs in plants mediate the strength of trophic cascades. <i>Science</i> , 2010 , 327, 1642-4	33.3	101
49	Jasmonates and Related Compounds in Plant-Insect Interactions. <i>Journal of Plant Growth Regulation</i> , 2004 , 23, 238-245	4.7	101
48	Direct and indirect root defences of milkweed (<i>Asclepias syriaca</i>): trophic cascades, trade-offs and novel methods for studying subterranean herbivory. <i>Journal of Ecology</i> , 2011 , 99, 16-25	6	95
47	Quorum sensing regulates electric current generation of <i>Pseudomonas aeruginosa</i> PA14 in bioelectrochemical systems. <i>Electrochemistry Communications</i> , 2010 , 12, 459-462	5.1	94
46	Individual variability in herbivore-specific elicitors from the plant's perspective. <i>Molecular Ecology</i> , 2004 , 13, 2421-33	5.7	80
45	Oxylipin channelling in <i>Nicotiana attenuata</i> : lipoxygenase 2 supplies substrates for green leaf volatile production. <i>Plant, Cell and Environment</i> , 2010 , 33, 2028-40	8.4	70
44	Herbivore-specific elicitation of photosynthesis by mirid bug salivary secretions in the wild tobacco <i>Nicotiana attenuata</i> . <i>New Phytologist</i> , 2011 , 191, 528-535	9.8	56
43	Leaf herbivory increases plant fitness via induced resistance to seed predators. <i>Ecology</i> , 2013 , 94, 966-976	5.6	50

42	Environmentally sustainable pest control options for <i>Drosophila suzukii</i> . <i>Journal of Applied Entomology</i> , 2018 , 142, 3-17	1.7	48
41	Cardenolides in nectar may be more than a consequence of allocation to other plant parts: a phylogenetic study of <i>Asclepias</i> . <i>Functional Ecology</i> , 2012 , 26, 1100-1110	5.6	46
40	The potato R locus codes for dihydroflavonol 4-reductase. <i>Theoretical and Applied Genetics</i> , 2009 , 119, 931-7	6	45
39	An ecological analysis of the herbivory-elicited JA burst and its metabolism: plant memory processes and predictions of the moving target model. <i>PLoS ONE</i> , 2009 , 4, e4697	3.7	45
38	Phylogenetic correlations among chemical and physical plant defenses change with ontogeny. <i>New Phytologist</i> , 2015 , 206, 796-806	9.8	44
37	Differential and Synergistic Functionality of Acylsugars in Suppressing Oviposition by Insect Herbivores. <i>PLoS ONE</i> , 2016 , 11, e0153345	3.7	42
36	Blumenols as shoot markers of root symbiosis with arbuscular mycorrhizal fungi. <i>ELife</i> , 2018 , 7,	8.9	35
35	Herbivore damage-induced production and specific anti-digestive function of serine and cysteine protease inhibitors in tall goldenrod, <i>Solidago altissima</i> L. (Asteraceae). <i>Planta</i> , 2013 , 237, 1287-96	4.7	34
34	Epigenetic Mechanisms Are Involved in Sex-Specific -Generational Immune Priming in the Lepidopteran Model Host. <i>Frontiers in Physiology</i> , 2019 , 10, 137	4.6	28
33	Quantitative trait loci regulating the fatty acid profile of acylsugars in tomato. <i>Molecular Breeding</i> , 2014 , 34, 1201-1213	3.4	23
32	An unbiased approach elucidates variation in (-)-(+)-linalool, a context-specific mediator of a tri-trophic interaction in wild tobacco. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 14651-14660	11.5	20
31	Controlled hydroxylations of diterpenoids allow for plant chemical defense without autotoxicity. <i>Science</i> , 2021 , 371, 255-260	33.3	20
30	Shoot phytochrome B modulates reactive oxygen species homeostasis in roots via abscisic acid signaling in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2018 , 94, 790-798	6.9	18
29	The effect of polychlorinated biphenyls on the song of two passerine species. <i>PLoS ONE</i> , 2013 , 8, e73471	3.7	18
28	Effects of plant vascular architecture on aboveground-belowground-induced responses to foliar and root herbivores on <i>Nicotiana tabacum</i> . <i>Journal of Chemical Ecology</i> , 2008 , 34, 1349-59	2.7	18
27	The decoration of specialized metabolites influences stylar development. <i>ELife</i> , 2018 , 7,	8.9	18
26	Overcompensating plants: their expression of resistance traits and effects on herbivore preference and performance. <i>Entomologia Experimentalis Et Applicata</i> , 2012 , 143, 245-253	2.1	17
25	Simultaneous analysis of tissue- and genotype-specific variation in <i>Solidago altissima</i> (Asteraceae) rhizome terpenoids, and the polyacetylene dehydromatricaria ester. <i>Chemoecology</i> , 2010 , 20, 255-264	2	17

24	Dietary plant phenolic improves survival of bacterial infection in <i>Manduca sexta</i> caterpillars. <i>Entomologia Experimentalis Et Applicata</i> , 2013 , 146, 321-331	2.1	16
23	Plant mating systems affect adaptive plasticity in response to herbivory. <i>Plant Journal</i> , 2014 , 78, 481-90	6.9	15
22	Information theory tests critical predictions of plant defense theory for specialized metabolism. <i>Science Advances</i> , 2020 , 6, eaaz0381	14.3	14
21	Jasmonate signaling makes flowers attractive to pollinators and repellent to florivores in nature. <i>Journal of Integrative Plant Biology</i> , 2018 , 60, 190-194	8.3	10
20	Symbiont-mediated chemical defense in the invasive ladybird. <i>Ecology and Evolution</i> , 2019 , 9, 1715-1729	2.8	9
19	Mate Selection in Self-Compatible Wild Tobacco Results from Coordinated Variation in Homologous Self-Incompatibility Genes. <i>Current Biology</i> , 2019 , 29, 2020-2030.e5	6.3	8
18	Strigolactone signaling regulates specialized metabolism in tobacco stems and interactions with stem-feeding herbivores. <i>PLoS Biology</i> , 2020 , 18, e3000830	9.7	8
17	Using natural variation to achieve a whole-plant functional understanding of the responses mediated by jasmonate signaling. <i>Plant Journal</i> , 2019 , 99, 414-425	6.9	6
16	The Clock Gene TOC1 in Shoots, Not Roots, Determines Fitness of under Drought. <i>Plant Physiology</i> , 2019 , 181, 305-318	6.6	5
15	TOC1 in <i>Nicotiana attenuata</i> regulates efficient allocation of nitrogen to defense metabolites under herbivory stress. <i>New Phytologist</i> , 2020 , 228, 1227-1242	9.8	5
14	Specific decorations of 17-hydroxygeranylinalool diterpene glycosides solve the autotoxicity problem of chemical defense in <i>Nicotiana attenuata</i> . <i>Plant Cell</i> , 2021 , 33, 1748-1770	11.6	5
13	Tri-trophic effects of seasonally variable induced plant defenses vary across the development of a shelter building moth larva and its parasitoid. <i>PLoS ONE</i> , 2015 , 10, e0120769	3.7	3
12	Quantification of Blumenol Derivatives as Leaf Biomarkers for Plant-AMF Association. <i>Bio-protocol</i> , 2019 , 9, e3301	0.9	3
11	Honeybee colonies compensate for pesticide-induced effects on royal jelly composition and brood survival with increased brood production. <i>Scientific Reports</i> , 2021 , 11, 62	4.9	3
10	Sequestration of Defenses against Predators Drives Specialized Host Plant Associations in Preadapted Milkweed Bugs (Heteroptera: Lygaeinae).. <i>American Naturalist</i> , 2022 , 199, E211-E228	3.7	2
9	Natural history-guided omics reveals plant defensive chemistry against leafhopper pests.. <i>Science</i> , 2022 , 375, eabm2948	33.3	2
8	Predation drives specialized host plant associations in preadapted milkweed bugs (Heteroptera: Lygaeinae)		2
7	Light dominates the diurnal emissions of herbivore-induced volatiles in wild tobacco. <i>BMC Plant Biology</i> , 2021 , 21, 401	5.3	2

6	microRNA390 modulates S tolerance response to herbivory. <i>Plant Direct</i> , 2021 , 5, e350	3.3	2
5	ZEITLUPE facilitates the rhythmic movements of <i>Nicotiana attenuata</i> flowers. <i>Plant Journal</i> , 2020 , 103, 308-322	6.9	1
4	Determining the scale at which variation in a single gene changes population yields. <i>ELife</i> , 2020 , 9,	8.9	1
3	Specific decorations of 17-hydroxygeranylinalool diterpene glycosides solve the autotoxicity problem of chemical defense in <i>Nicotiana attenuata</i>		1
2	Natural variation in linalool metabolites: One genetic locus, many functions?. <i>Journal of Integrative Plant Biology</i> , 2021 , 63, 1416-1421	8.3	0
1	Syringaldehyde is a novel smoke-derived germination cue for the native fire-chasing tobacco, <i>Nicotiana attenuata</i> . <i>Seed Science Research</i> , 2021 , 31, 292-299	1.3	0