Patrick J Tranel

List of Publications by Year
in descending order

121 papers	6,904 citations	61984 43 h-index	69250 77 g-index
127 all docs	127 docs citations	127 times ranked	3027 citing authors

#	Article	IF	Citations
1	Resistance of weeds to ALS-inhibiting herbicides: what have we learned?. Weed Science, 2002, 50, 700-712.	1.5	697
2	Gene amplification confers glyphosate resistance in <i>Amaranthus palmeri</i>. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1029-1034.	7.1	557
3	Non-target-site herbicide resistance: a family business. Trends in Plant Science, 2007, 12, 6-13.	8.8	451
4	Mechanisms of evolved herbicide resistance. Journal of Biological Chemistry, 2020, 295, 10307-10330.	3.4	329
5	A codon deletion confers resistance to herbicides inhibiting protoporphyrinogen oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12329-12334.	7.1	176
6	Review: Confirmation of Resistance to Herbicides and Evaluation of Resistance Levels. Weed Science, 2013, 61, 4-20.	1.5	164
7	Distinct Detoxification Mechanisms Confer Resistance to Mesotrione and Atrazine in a Population of Waterhemp Â Â Â. Plant Physiology, 2013, 163, 363-377.	4.8	140
8	A biotype of common waterhemp (<i>Amaranthus rudis</i>) resistant to triazine and ALS herbicides. Weed Science, 1998, 46, 514-520.	1.5	132
9	Resistance to PPO â€inhibiting herbicide inÂPalmer amaranth from Arkansas. Pest Management Science, 2016, 72, 864-869.	3.4	124
10	A waterhemp (Amaranthus tuberculatus) biotype with multiple resistance across three herbicide sites of action. Weed Science, 2005, 53, 30-36.	1.5	123
11	Managing the evolution of herbicide resistance. Pest Management Science, 2016, 72, 74-80.	3.4	122
12	Herbicide Resistances in Amaranthus tuberculatus: A Call for New Options. Journal of Agricultural and Food Chemistry, 2011, 59, 5808-5812.	5.2	116
13	Characterization of the horseweed (<i>Conyza canadensis</i>) transcriptome using GSâ€FLX 454 pyrosequencing and its application for expression analysis of candidate nonâ€target herbicide resistance genes. Pest Management Science, 2010, 66, 1053-1062.	3.4	112
14	Herbicideâ€resistant weeds: from research and knowledge to future needs. Evolutionary Applications, 2013, 6, 1218-1221.	3.1	108
15	Resistance to HPPDâ€inhibiting herbicides in a population of waterhemp (<i>Amaranthus) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	3.4	104
16	Multiple modes of convergent adaptation in the spread of glyphosate-resistant <i>Amaranthus tuberculatus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21076-21084.	7.1	98
17	A kochia (<i>Kochia scoparia</i>) biotype resistant to triazine and ALS-inhibiting herbicides. Weed Science, 1999, 47, 20-27.	1.5	97
18	Multiple Resistance to Herbicides from Four Site-of-Action Groups in Waterhemp (<i>Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.5	90

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19	Characterization of <i>de novo</i> transcriptome for waterhemp (<i>Amaranthus tuberculatus</i>) using GSâ€FLX 454 pyrosequencing and its application for studies of herbicide targetâ€site genes. Pest Management Science, 2010, 66, 1042-1052.	3.4	89
20	Target-Site Mutations Conferring Herbicide Resistance. Plants, 2019, 8, 382.	3.5	89
21	Evolution of Weediness and Invasiveness: Charting the Course for Weed Genomics. Weed Science, 2009, 57, 451-462.	1.5	82
22	Variable herbicide responses among Illinois waterhemp (Amaranthus rudis and A. tuberculatus) populations. Crop Protection, 2002, 21, 707-712.	2.1	78
23	The power and potential of genomics in weed biology and management. Pest Management Science, 2018, 74, 2216-2225.	3.4	76
24	Multiple ALS Mutations Confer Herbicide Resistance in Waterhemp (<i>Amaranthus tuberculatus</i>). Weed Science, 2007, 55, 421-428.	1.5	73
25	Molecular Mechanisms of Herbicide Resistance. Weed Science, 2015, 63, 91-115.	1.5	73
26	Two new <i><scp>PPX2</scp></i> mutations associated with resistance to <scp>PPO</scp>â€inhibiting herbicides in <i>Amaranthus palmeri</i>. Pest Management Science, 2017, 73, 1559-1563.	3.4	67
27	Characterization of a Common Ragweed (<i>Ambrosia artemisiifolia</i>) Population Resistant to ALS- and PPO-Inhibiting Herbicides. Weed Science, 2012, 60, 335-344.	1.5	65
28	Origins and structure of chloroplastic and mitochondrial plant protoporphyrinogen oxidases: implications for the evolution of herbicide resistance. Pest Management Science, 2018, 74, 2226-2234.	3.4	65
29	Crossâ€resistance of horseweed (<i>Conyza canadensis</i>) populations with three different ALS mutations. Pest Management Science, 2011, 67, 1486-1492.	3.4	62
30	Transcriptome Response to Glyphosate in Sensitive and Resistant Soybean. Journal of Agricultural and Food Chemistry, 2008, 56, 6355-6363.	5.2	60
31	A Waterhemp (<i>Amaranthus tuberculatus</i>) Population Resistant to 2,4-D. Weed Science, 2012, 60, 379-384.	1.5	60
32	Metabolism of 2,4â€dichlorophenoxyacetic acid contributes to resistance in a common waterhemp (<i>Amaranthus tuberculatus</i>) population. Pest Management Science, 2018, 74, 2356-2362.	3.4	60
33	Effects of Photosystemâ€IIâ€Interfering Herbicides Atrazine and Bentazon on the Soybean Transcriptome. Plant Genome, 2009, 2, .	2.8	59
34	Biochemical and structural consequences of a glycine deletion in the Î±-8 helix of protoporphyrinogen oxidase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2010, 1804, 1548-1556.	2.3	57
35	Physical Mapping of Amplified Copies of the 5-Enolpyruvylshikimate-3-Phosphate Synthase Gene in Glyphosate-Resistant <i>Amaranthus tuberculatus</i>. Plant Physiology, 2017, 173, 1226-1234.	4.8	54
36	Sampling the Waterhemp (<i>Amaranthus tuberculatus</i>) Genome Using Pyrosequencing Technology. Weed Science, 2009, 57, 463-469.	1.5	53

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37	Distribution of Herbicide Resistances and Molecular Mechanisms Conferring Resistance in Missouri Waterhemp (<i>Amaranthus rudis</i>Sauer) Populations. Weed Science, 2015, 63, 336-345.	1.5	53
38	Out of the swamp: unidirectional hybridization with weedy species may explain the prevalence of <i>Amaranthus tuberculatus</i> as a weed. New Phytologist, 2009, 184, 819-827.	7.3	52
39	Molecular analysis of cloransulam resistance in a population of giant ragweed. Weed Science, 2002, 50, 299-305.	1.5	51
40	Defining the Rate Requirements for Synergism Between Mesotrione and Atrazine in Redroot Pigweed (Amaranthus Retroflexus). Weed Science, 2008, 56, 265-270.	1.5	51
41	Draft Genomes of Amaranthus tuberculatus, Amaranthus hybridus, and Amaranthus palmeri. Genome Biology and Evolution, 2020, 12, 1988-1993.	2.5	51
42	Promiscuity in weedy amaranths: high frequency of female tall waterhemp (Amaranthus tuberculatus) Ã— smooth pigweed (A. hybridus) hybridization under field conditions. Weed Science, 2005, 53, 46-54.	1.5	50
43	Tembotrione detoxification in 4â€hydroxyphenylpyruvate dioxygenase (HPPD) inhibitorâ€resistant Palmer amaranth (<scp><i>Amaranthus palmeri</i></scp> S. Wats.). Pest Management Science, 2018, 74, 2325-2334.	3.4	50
44	A common ragweed population resistant to cloransulam-methyl. Weed Science, 2001, 49, 485-490.	1.5	48
45	Evolution of resistance to phytoene desaturase and protoporphyrinogen oxidase inhibitorsÂâ€“Âstate of knowledge. Pest Management Science, 2014, 70, 1358-1366.	3.4	47
46	Prevalence of a Novel Resistance Mechanism to PPO-Inhibiting Herbicides in Waterhemp (Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.5	46
47	Genome Size Analysis of Weedy Amaranthus Species. Crop Science, 2005, 45, 2557-2562.	1.8	45
48	EPSPS Gene Amplification is Present in the Majority of Glyphosate-Resistant Illinois Waterhemp (<i>Amaranthus tuberculatus</i>) Populations. Weed Technology, 2015, 29, 48-55.	0.9	45
49	Pollen Biology and Dispersal Dynamics in Waterhemp (Amaranthus<i>tuberculatus</i>). Weed Science, 2012, 60, 416-422.	1.5	44
50	Identification of Genetic Elements Associated with EPSPS Gene Amplification. PLoS ONE, 2013, 8, e65819.	2.5	44
51	Nontarget-Site Resistance to ALS Inhibitors in Waterhemp (<i>Amaranthus tuberculatus</i>). Weed Science, 2015, 63, 399-407.	1.5	44
52	Herbicide resistance in <scp><i>Amaranthus tuberculatus</i></scp>^{â€}. Pest Management Science, 2021, 77, 43-54.	3.4	43
53	Triazine resistance inAmaranthus tuberculatus (Moq) Sauer that is not site-of-action mediated. Pest Management Science, 2003, 59, 1134-1142.	3.4	42
54	A Multistate Study of the Association Between Glyphosate Resistance and EPSPS Gene Amplification in Waterhemp (<i>Amaranthus tuberculatus</i>). Weed Science, 2015, 63, 569-577.	1.5	42

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55	Responses of an HPPD Inhibitor-Resistant Waterhemp (<i>Amaranthus tuberculatus</i>) Population to Soil-Residual Herbicides. Weed Technology, 2013, 27, 704-711.	0.9	40
56	Genetics and Inheritance of Nontarget-Site Resistances to Atrazine and Mesotrione in a Waterhemp (<i>Amaranthus tuberculatus</i>) Population from Illinois. Weed Science, 2015, 63, 799-809.	1.5	40
57	Wide Distribution of the Waterhemp (<i>Amaranthus tuberculatus</i>) Î”G210<i>PPX2</i>Mutation, which Confers Resistance to PPO-Inhibiting Herbicides. Weed Science, 2011, 59, 22-27.	1.5	38
58	Limited fitness costs of herbicideâ€resistance traits in <scp><i>Amaranthus tuberculatus</i></scp> facilitate resistance evolution. Pest Management Science, 2018, 74, 293-301.	3.4	38
59	Frequency of Gly-210 Deletion Mutation among Protoporphyrinogen Oxidase Inhibitorâ€“Resistant Palmer Amaranth (<i>Amaranthus palmeri</i>) Populations. Weed Science, 2017, 65, 718-731.	1.5	33
60	The Draft Genome of Kochia scoparia and the Mechanism of Glyphosate Resistance via Transposon-Mediated EPSPS Tandem Gene Duplication. Genome Biology and Evolution, 2019, 11, 2927-2940.	2.5	31
61	Amaranthus. , 2011, , 11-21.		30
62	Acetolactate synthase mutation conferring imidazolinone-specific herbicide resistance in Amaranthus hybridus. Journal of Plant Physiology, 2006, 163, 475-479.	3.5	29
63	Optimizing RNAâ€seq studies to investigate herbicide resistance. Pest Management Science, 2018, 74, 2260-2264.	3.4	29
64	Characterization of a waterhemp (Amaranthus tuberculatus) population from Illinois resistant to herbicides from five site-of-action groups. Weed Technology, 2019, 33, 400-410.	0.9	29
65	DNA content analysis of smooth pigweed (Amaranthus hybridus) and tall waterhemp (A. tuberculatus): implications for hybrid detection. Weed Science, 2003, 51, 1-3.	1.5	28
66	21st-Century Weed Science: A Call forAmaranthus Genomics. , 0, , 53-81.		27
67	Intraspecific variability of the acetolactate synthase gene. Weed Science, 2004, 52, 236-241.	1.5	26
68	Nonhybrid Progeny from Crosses of Dioecious Amaranths: Implications for Gene-Flow Research. Weed Science, 2007, 55, 119-122.	1.5	25
69	Sex-specific markers for waterhemp (<i>Amaranthus tuberculatus</i>) and Palmer amaranth (<i>Amaranthus palmeri</i>). Weed Science, 2019, 67, 412-418.	1.5	25
70	Molecular Biology and Genomics: New Tools for Weed Science. BioScience, 2009, 59, 207-215.	4.9	23
71	The genetic architecture and population genomic signatures of glyphosate resistance in <i>Amaranthus tuberculatus</i>. Molecular Ecology, 2021, 30, 5373-5389.	3.9	22
72	Distribution of the Î”G210 Protoporphyrinogen Oxidase Mutation in Illinois Waterhemp (<i>Amaranthus) Tj ETQq0 0.0 rgBT /Overlock 1(	1.5	21

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73	Distribution of <i>PPX2</i> Mutations Conferring PPO-Inhibitor Resistance in Palmer Amaranth Populations of Tennessee. Weed Technology, 2018, 32, 592-596.	0.9	21
74	Coexpression Clusters and Allele-Specific Expression in Metabolism-Based Herbicide Resistance. Genome Biology and Evolution, 2020, 12, 2267-2278.	2.5	21
75	Will the<i>Amaranthus tuberculatus</i>Resistance Mechanism to PPO-Inhibiting Herbicides Evolve in Other<i>Amaranthus</i>Species?. International Journal of Agronomy, 2012, 2012, 1-7.	1.2	19
76	A quantitative assay for <i>Amaranthus palmeri</i> identification. Pest Management Science, 2017, 73, 2221-2224.	3.4	18
77	Novel software package for cross-platform transcriptome analysis (CPTRA). BMC Bioinformatics, 2009, 10, S16.	2.6	17
78	Association of the W574L ALS substitution with resistance to cloransulam and imazamox in common ragweed (Ambrosia artemisiifolia). Weed Science, 2005, 53, 424-430.	1.5	16
79	Confronting herbicide resistance with cooperative management. Pest Management Science, 2018, 74, 2424-2431.	3.4	16
80	Target-Site Mutations and Expression of ALS Gene Copies Vary According to Echinochloa Species. Genes, 2021, 12, 1841.	2.4	16
81	Time Requirement from Pollination to Seed Maturity in Waterhemp (<i>Amaranthus tuberculatus</i>). Weed Science, 2010, 58, 167-173.	1.5	15
82	Responses of a Waterhemp (<i>Amaranthus tuberculatus</i>) Population Resistant to HPPD-Inhibiting Herbicides to Foliar-Applied Herbicides. Weed Technology, 2016, 30, 106-115.	0.9	15
83	Herbicideâ€resistance mechanisms: gene amplification is not just for glyphosate. Pest Management Science, 2017, 73, 2225-2226.	3.4	15
84	Survey of glyphosate-, atrazine- and lactofen-resistance mechanisms in Ohio waterhemp (<i>Amaranthus tuberculatus</i>) populations. Weed Science, 2019, 67, 296-302.	1.5	15
85	Comparing responses of sensitive and resistant populations of Palmer amaranth (<i>Amaranthus) Tj ETQq1 1 0.784314 rgBT /Overlock Weed Technology, 2020, 34, 140-146.	0.9	14
86	Characterization of Waterhemp (Amaranthus tuberculatus) Ã— Smooth Pigweed (A. hybridus) F1Hybrids. Weed Technology, 2006, 20, 14-22.	0.9	13
87	Identification of Arabidopsis thaliana variants with differential glyphosate responses. Journal of Plant Physiology, 2007, 164, 1337-1345.	3.5	13
88	The EPSPS Pro106Ser substitution solely accounts for glyphosate resistance in a goosegrass (Eleusine) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.5	13
89	Control of Glyphosate-Resistant Common waterhemp (Amaranthus rudis) in Three New Herbicide-Resistant Soybean Varieties in Ontario. Weed Technology, 2017, 31, 828-837.	0.9	13
90	Future efficacy of preâ€emergence herbicides in corn (<scp><i>Zea mays</i></scp>) is threatened by more variable weather. Pest Management Science, 2021, 77, 2683-2689.	3.4	13

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91	Genetic relationships of common cocklebur accessions from the United States. Weed Science, 2001, 49, 318-325.	1.5	12
92	Variation in soybean (Glycine max (L.) Merr.) interference among common cocklebur (Xanthium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	2.1	12
93	Multiple-Herbicide Resistance in a 2,4-Dâ€"Resistant Waterhemp (<i>Amaranthus tuberculatus</i>) Population from Nebraska. Weed Science, 2017, 65, 743-754.	1.5	12
94	Control of Glyphosate-Resistant Common Waterhemp (<i>Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (tuberculatus</i>v	0.9	12
95	Glyphosate-Resistant Junglerice (<i>Echinochloa colona</i>) from Mississippi and Tennessee: Magnitude and Resistance Mechanisms. Weed Science, 2018, 66, 603-610.	1.5	12
96	Empirical investigation of mutation rate for herbicide resistance. Weed Science, 2019, 67, 361-368.	1.5	12
97	Maleâ€specific Yâ€chromosomal regions in waterhemp (<i>Amaranthus tuberculatus</i>) and Palmer amaranth (<i>Amaranthus palmeri</i>). New Phytologist, 2021, 229, 3522-3533.	7.3	12
98	Heritability of Glyphosate Resistance in Indiana Horseweed (<i>Conyza canadensis</i>) Populations. Weed Science, 2010, 58, 30-38.	1.5	11
99	Evolution of Glyphosate-Resistant Weeds. Reviews of Environmental Contamination and Toxicology, 2021, 255, 93-128.	1.3	11
100	Repeated origins, widespread gene flow, and allelic interactions of target-site herbicide resistance mutations. ELife, 2022, 11, .	6.0	11
101	Utilization of DNA Microarrays in Weed Science Research. Weed Science, 2008, 56, 283-289.	1.5	10
102	Insight into the Structural Requirements of Protoporphyrinogen Oxidase Inhibitors: Molecular Docking and CoMFA of Diphenyl Ether, Isoxazole Phenyl, and Pyrazole Phenyl Ether. Chinese Journal of Chemistry, 2013, 31, 1153-1158.	4.9	10
103	The first record of protoporphyrinogen oxidase and four-way herbicide resistance in eastern Canada. Canadian Journal of Plant Science, 2020, 100, 327-331.	0.9	10
104	Molecular confirmation of resistance to PPO inhibitors in <i>Amaranthus tuberculatus</i> and <i>Amaranthus palmeri</i>, and isolation of the G399A PPO2 substitution in <i>A. palmeri</i>. Weed Technology, 2021, 35, 99-105.	0.9	10
105	Genomicâ€based epidemiology reveals independent origins and gene flow of glyphosate resistance in <i>Bassia scoparia</i> populations across North America. Molecular Ecology, 2021, 30, 5343-5359.	3.9	10
106	Soil-Residual Protoporphyrinogen Oxidaseâ€"Inhibiting Herbicides Influence the Frequency of Associated Resistance in Waterhemp (<i>Amaranthus tuberculatus</i>). Weed Science, 2015, 63, 529-538.	1.5	9
107	Target-Site Resistances to ALS and PPO Inhibitors Are Linked in Waterhemp (Amaranthus tuberculatus). Weed Science, 2017, 65, 4-8.	1.5	9
108	Identification and Validation of <i>Amaranthus</i> Speciesâ€Specific SNPs within the <i>ITS</i> Region: Applications in Quantitative Species Identification. Crop Science, 2018, 58, 304-311.	1.8	9

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109	Coevolution of resistance to PPO inhibitors in waterhemp (Amaranthus tuberculatus) and Palmer amaranth (Amaranthus palmeri). Weed Science, 2019, 67, 521-526.	1.5	9
110	Distribution and validation of genotypic and phenotypic glyphosate and PPO-inhibitor resistance in Palmer amaranth (Amaranthus palmeri) from southwestern Nebraska. Weed Technology, 2021, 35, 65-76.	0.9	9
111	Characterization and inheritance of dicamba resistance in a multiple-resistant waterhemp (<i>Amaranthus tuberculatus</i>) population from Illinois. Weed Science, 2022, 70, 4-13.	1.5	9
112	Cropâ€“weed hybrids are more frequent for the grain amaranth â€˜Plainsmanâ€™ than for â€˜D136-1â€™. Genetic Resources and Crop Evolution, 2013, 60, 2201-2205.	1.6	7
113	Genetic architecture underlying <scp>HPPD</scp>â€inhibitor resistance in a Nebraska <scp><i>Amaranthus tuberculatus</i></scp> population. Pest Management Science, 2021, 77, 4884-4891.	3.4	7
114	Variation Among U.S. Accessions of Common Cocklebur (Xanthium strumarium)1. Weed Technology, 2002, 16, 171-179.	0.9	6
115	Responses of Contemporary and Historical Waterhemp (<i>Amaranthus tuberculatus</i>) Accessions to Glyphosate. Weed Science, 2007, 55, 327-333.	1.5	6
116	Variability in Photosynthetic Rates and Accumulated Biomass Among Greenhouse-Grown Common Cocklebur (Xanthium strumarium) Accessions1. Weed Technology, 2003, 17, 84-88.	0.9	5
117	Multiple Genomic Regions Govern Tolerance to Sulfentrazone in Snap Bean (Phaseolus Vulgaris L.). Frontiers in Agronomy, 2022, 4, .	3.3	5
118	In vitro root induction in weedy amaranthus species to obtain mitotic chromosomes. In Vitro Cellular and Developmental Biology - Plant, 2005, 41, 844-847.	2.1	3
119	Target Site Resistance to Acetolactate Synthase Inhibitors in a Fall Panicum (Panicum) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 34 Technology, 0, , 1-28.	0.9	1
120	Cover Image, Volume 74, Issue 2. Pest Management Science, 2018, 74, i-i.	3.4	0
121	Biologically effective dose of metribuzin applied preemergence and postemergence for the control of waterhemp (Amaranthus tuberculatus) with different mechanisms of resistance to photosystem IIâ€“inhibiting herbicides. Weed Science, 0, , 1-11.	1.5	0