

# Takashi HIRAYAMA

## List of Publications by Year in descending order

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82  
papers

11,052  
citations

53794

45  
h-index

64796

79  
g-index

82  
all docs

82  
docs citations

82  
times ranked

11283  
citing authors

#	ARTICLE	IF	CITATIONS
1	EIN2, a Bifunctional Transducer of Ethylene and Stress Responses in Arabidopsis. <i>Science</i> , 1999, 284, 2148-2152.	12.6	1,172
2	Research on plant abiotic stress responses in the post-genome era: past, present and future. <i>Plant Journal</i> , 2010, 61, 1041-1052.	5.7	1,021
3	Type 2C protein phosphatases directly regulate abscisic acid-activated protein kinases in Arabidopsis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17588-17593.	7.1	980
4	A Transmembrane Hybrid-Type Histidine Kinase in Arabidopsis Functions as an Osmosensor. <i>Plant Cell</i> , 1999, 11, 1743-1754.	6.6	501
5	A gene encoding a mitogen-activated protein kinase kinase kinase is induced simultaneously with genes for a mitogen-activated protein kinase and an S6 ribosomal protein kinase by touch, cold, and water stress in <i>Arabidopsis thaliana</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996, 93, 765-769.	7.1	483
6	Perception and transduction of abscisic acid signals: keys to the function of the versatile plant hormone ABA. <i>Trends in Plant Science</i> , 2007, 12, 343-351.	8.8	441
7	RESPONSIVE-TO-ANTAGONIST1, a Menkes/Wilson Disease-Related Copper Transporter, Is Required for Ethylene Signaling in Arabidopsis. <i>Cell</i> , 1999, 97, 383-393.	28.9	385
8	Zinc finger protein STOP1 is critical for proton tolerance in Arabidopsis and coregulates a key gene in aluminum tolerance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 9900-9905.	7.1	374
9	A gene encoding a phosphatidylinositol-specific phospholipase C is induced by dehydration and salt stress in <i>Arabidopsis thaliana</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995, 92, 3903-3907.	7.1	360
10	ABA-Hypersensitive Germination3 Encodes a Protein Phosphatase 2C (AtPP2CA) That Strongly Regulates Abscisic Acid Signaling during Germination among Arabidopsis Protein Phosphatase 2Cs. <i>Plant Physiology</i> , 2006, 140, 115-126.	4.8	344
11	AtIPT3 is a Key Determinant of Nitrate-Dependent Cytokinin Biosynthesis in Arabidopsis. <i>Plant and Cell Physiology</i> , 2004, 45, 1053-1062.	3.1	343
12	The barley pan-genome reveals the hidden legacy of mutation breeding. <i>Nature</i> , 2020, 588, 284-289.	27.8	314
13	An ABRE Promoter Sequence is Involved in Osmotic Stress-Responsive Expression of the DREB2A Gene, Which Encodes a Transcription Factor Regulating Drought-Inducible Genes in Arabidopsis. <i>Plant and Cell Physiology</i> , 2011, 52, 2136-2146.	3.1	263
14	Elucidation of the RNA Recognition Code for Pentatricopeptide Repeat Proteins Involved in Organelle RNA Editing in Plants. <i>PLoS ONE</i> , 2013, 8, e57286.	2.5	263
15	ABA-Hypersensitive Germination1 encodes a protein phosphatase 2C, an essential component of abscisic acid signaling in Arabidopsis seed. <i>Plant Journal</i> , 2007, 50, 935-949.	5.7	260
16	A collection of 11,800 single-copy transposon insertion lines in Arabidopsis. <i>Plant Journal</i> , 2004, 37, 897-905.	5.7	203
17	Hyperosmotic Stress Induces a Rapid and Transient Increase in Inositol 1,4,5-Trisphosphate Independent of Abscisic Acid in Arabidopsis Cell Culture. <i>Plant and Cell Physiology</i> , 2001, 42, 214-222.	3.1	167
18	Identification of two cell-cycle-controlling cdc2 gene homologs in <i>Arabidopsis thaliana</i> . <i>Gene</i> , 1991, 105, 159-165.	2.2	160

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19	Allantoin, a stress-related purine metabolite, can activate jasmonate signaling in a MYC2-regulated and abscisic acid-dependent manner. <i>Journal of Experimental Botany</i> , 2016, 67, 2519-2532.	4.8	154
20	Stable Isotope Labeling of <i>Arabidopsis thaliana</i> for an NMR-Based Metabolomics Approach. <i>Plant and Cell Physiology</i> , 2004, 45, 1099-1104.	3.1	145
21	Control of seed dormancy and germination by DOG1-AHG1 PP2C phosphatase complex via binding to heme. <i>Nature Communications</i> , 2018, 9, 2132.	12.8	138
22	Analysis of ABA Hypersensitive Germination2 revealed the pivotal functions of PARN in stress response in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2005, 44, 972-984.	5.7	131
23	RCH1, a Locus in <i>Arabidopsis</i> That Confers Resistance to the Hemibiotrophic Fungal Pathogen <i>Colletotrichum higginsianum</i> . <i>Molecular Plant-Microbe Interactions</i> , 2004, 17, 749-762.	2.6	123
24	A trial of phenome analysis using 4000Ds-insertional mutants in gene-coding regions of <i>Arabidopsis</i> . <i>Plant Journal</i> , 2006, 47, 640-651.	5.7	110
25	Novel protein kinase of <i>Arabidopsis thaliana</i> (APK1) that phosphorylates tyrosine, serine and threonine. <i>Plant Molecular Biology</i> , 1992, 20, 653-662.	3.9	103
26	Cloning and characterization of seven cDNAs for hyperosmolarity-responsive (HOR) genes of <i>Saccharomyces cerevisiae</i> . <i>Molecular Genetics and Genomics</i> , 1995, 249, 127-138.	2.4	103
27	The Glycerophosphoryl Diester Phosphodiesterase-Like Proteins SHV3 and its Homologs Play Important Roles in Cell Wall Organization. <i>Plant and Cell Physiology</i> , 2008, 49, 1522-1535.	3.1	103
28	Salicylic acid-dependent immunity contributes to resistance against <i>Rhizoctonia solani</i> , a necrotrophic fungal agent of sheath blight, in rice and <i>Brachypodium distachyon</i> . <i>New Phytologist</i> , 2018, 217, 771-783.	7.3	102
29	The Putative Peptide Gene FEP1 Regulates Iron Deficiency Response in <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2018, 59, 1739-1752.	3.1	101
30	Computer vision-based phenotyping for improvement of plant productivity: a machine learning perspective. <i>GigaScience</i> , 2019, 8, .	6.4	99
31	Cytological and Biochemical Analysis of COF1, an <i>Arabidopsis</i> Mutant of an ABC Transporter Gene. <i>Plant and Cell Physiology</i> , 2007, 48, 1524-1533.	3.1	84
32	Systematic NMR Analysis of Stable Isotope Labeled Metabolite Mixtures in Plant and Animal Systems: Coarse Grained Views of Metabolic Pathways. <i>PLoS ONE</i> , 2008, 3, e3805.	2.5	78
33	A cdc5+ homolog of a higher plant, <i>Arabidopsis thaliana</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996, 93, 13371-13376.	7.1	77
34	Isolation and Characterization of Novel Mutants Affecting the Abscisic Acid Sensitivity of <i>Arabidopsis</i> Germination and Seedling Growth. <i>Plant and Cell Physiology</i> , 2004, 45, 1485-1499.	3.1	74
35	Exon-intron organization of the <i>Arabidopsis thaliana</i> protein kinase genes CDC2a and CDC2b. <i>FEBS Letters</i> , 1992, 304, 73-77.	2.8	72
36	Overexpression of <i>Prunus</i> DAM6 inhibits growth, represses bud break competency of dormant buds and delays bud outgrowth in apple plants. <i>PLoS ONE</i> , 2019, 14, e0214788.	2.5	69

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37	Loss of NECROTIC SPOTTED LESIONS 1 associates with cell death and defense responses in <i>Arabidopsis thaliana</i> . <i>Plant Molecular Biology</i> , 2006, 62, 29-42.	3.9	68
38	Expression and Interaction Analysis of <i>Arabidopsis</i> Skp1-Related Genes. <i>Plant and Cell Physiology</i> , 2004, 45, 83-91.	3.1	67
39	AtPLC2, a gene encoding phosphoinositide-specific phospholipase C, is constitutively expressed in vegetative and floral tissues in <i>Arabidopsis thaliana</i> . <i>Plant Molecular Biology</i> , 1997, 34, 175-180.	3.9	66
40	Quantitative trait loci analysis of nitrate storage in <i>Arabidopsis</i> leading to an investigation of the contribution of the anion channel gene, AtCLC-c, to variation in nitrate levels. <i>Journal of Experimental Botany</i> , 2004, 55, 2005-2014.	4.8	65
41	Isolation of <i>Arabidopsis</i> ahg11, a weak ABA hypersensitive mutant defective in nad4 RNA editing. <i>Journal of Experimental Botany</i> , 2012, 63, 5301-5310.	4.8	61
42	Top-down Phenomics of <i>Arabidopsis thaliana</i> . <i>Journal of Biological Chemistry</i> , 2007, 282, 18532-18541.	3.4	58
43	ABI1 regulates carbon/nitrogen-nutrient signal transduction independent of ABA biosynthesis and canonical ABA signalling pathways in <i>Arabidopsis</i> . <i>Journal of Experimental Botany</i> , 2015, 66, 2763-2771.	4.8	53
44	Ethylene Captures a Metal! Metal Ions Are Involved in Ethylene Perception and Signal Transduction. <i>Plant and Cell Physiology</i> , 2000, 41, 548-555.	3.1	51
45	Comprehensive quantification and genome survey reveal the presence of novel phytohormone action modes in red seaweeds. <i>Journal of Applied Phycology</i> , 2016, 28, 2539-2548.	2.8	47
46	Organization and characterization of the virCD genes from <i>Agrobacterium rhizogenes</i> . <i>Molecular Genetics and Genomics</i> , 1988, 213, 229-237.	2.4	44
47	A poly(A)-specific ribonuclease directly regulates the poly(A) status of mitochondrial mRNA in <i>Arabidopsis</i> . <i>Nature Communications</i> , 2013, 4, 2247.	12.8	43
48	The PP2C-SnRK2 complex. <i>Plant Signaling and Behavior</i> , 2010, 5, 160-163.	2.4	42
49	Molecular responses to water stress in <i>Arabidopsis thaliana</i> . <i>Journal of Plant Research</i> , 1998, 111, 345-351.	2.4	41
50	Transcriptome Analysis and Identification of a Transcriptional Regulatory Network in the Response to H <sub>2</sub> O <sub>2</sub> . <i>Plant Physiology</i> , 2019, 180, 1629-1646.	4.8	37
51	ABA Hypersensitive Germination2-1 Causes the Activation of Both Abscisic Acid and Salicylic Acid Responses in <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2009, 50, 2112-2122.	3.1	32
52	Putative start codon TTG for the regulatory protein VirG of the hairy-root-inducing plasmid pRIA4. <i>Gene</i> , 1989, 78, 173-178.	2.2	31
53	A Novel Ethanol-Hypersensitive Mutant of <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2004, 45, 703-711.	3.1	27
54	Disruption of ureide degradation affects plant growth and development during and after transition from vegetative to reproductive stages. <i>BMC Plant Biology</i> , 2018, 18, 287.	3.6	25

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55	Phytohormones in red seaweeds: a technical review of methods for analysis and a consideration of genomic data. <i>Botanica Marina</i> , 2017, 60, .	1.2	24
56	Functional cloning of a cDNA encoding Mei2-like protein from <i>Arabidopsis thaliana</i> using a fission yeast pheromone receptor deficient mutant. <i>FEBS Letters</i> , 1997, 413, 16-20.	2.8	22
57	BdWRKY38 is required for the incompatible interaction of <i>Brachypodium distachyon</i> with the necrotrophic fungus <i>Rhizoctonia solani</i> . <i>Plant Journal</i> , 2020, 104, 995-1008.	5.7	18
58	Abscisic acid induces ectopic outgrowth in epidermal cells through cortical microtubule reorganization in <i>Arabidopsis thaliana</i> . <i>Scientific Reports</i> , 2015, 5, 11364.	3.3	17
59	Crop improvement using life cycle datasets acquired under field conditions. <i>Frontiers in Plant Science</i> , 2015, 6, 740.	3.6	16
60	Metabolic movement upon abscisic acid and salicylic acid combined treatments. <i>Plant Biotechnology</i> , 2009, 26, 551-560.	1.0	16
61	Plant Hormonomics: A Key Tool for Deep Physiological Phenotyping to Improve Crop Productivity. <i>Plant and Cell Physiology</i> , 2023, 63, 1826-1839.	3.1	16
62	A DNA-binding surface of SPO11-1, an <i>Arabidopsis</i> SPO11 orthologue required for normal meiosis. <i>FEBS Journal</i> , 2010, 277, 2360-2374.	4.7	15
63	Loss of CG methylation in <i>Marchantia polymorpha</i> causes disorganization of cell division and reveals unique DNA methylation regulatory mechanisms of non-CG methylation. <i>Plant and Cell Physiology</i> , 2018, 59, 2421-2431.	3.1	15
64	Hormonal and transcriptional analyses of fruit development and ripening in different varieties of black pepper ( <i>Piper nigrum</i> ). <i>Journal of Plant Research</i> , 2020, 133, 73-94.	2.4	15
65	Characterization of the vir A gene of the agropine-type plasmid pRiA4 of <i>Agrobacterium rhizogenes</i> . <i>FEBS Letters</i> , 1990, 271, 28-32.	2.8	14
66	Plant hormone profiling in developing seeds of common wheat (<i>Triticum aestivum</i> L.). <i>Breeding Science</i> , 2019, 69, 601-610.	1.9	14
67	A Novel <i>Arabidopsis</i> Gene Required for Ethanol Tolerance is Conserved Among Plants and Archaea. <i>Plant and Cell Physiology</i> , 2004, 45, 659-666.	3.1	13
68	The mechanism of SO <sub>2</sub> -induced stomatal closure differs from O <sub>3</sub> and CO <sub>2</sub> responses and is mediated by nonapoptotic cell death in guard cells. <i>Plant, Cell and Environment</i> , 2019, 42, 437-447.	5.7	12
69	Decoding Plant-Environment Interactions That Influence Crop Agronomic Traits. <i>Plant and Cell Physiology</i> , 2020, 61, 1408-1418.	3.1	11
70	Temperature-dependent fasciation mutants provide a link between mitochondrial RNA processing and lateral root morphogenesis. <i>ELife</i> , 2021, 10, .	6.0	11
71	Multiple hormone treatment revealed novel cooperative relationships between abscisic acid and biotic stress hormones in cultured cells. <i>Plant Biotechnology</i> , 2012, 29, 19-34.	1.0	7
72	Regulation of the Poly(A) Status of Mitochondrial mRNA by Poly(A)-Specific Ribonuclease Is Conserved among Land Plants. <i>Plant and Cell Physiology</i> , 2020, 61, 470-480.	3.1	7

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73	Genetic Elucidation for Response of Flowering Time to Ambient Temperatures in Asian Rice Cultivars. International Journal of Molecular Sciences, 2021, 22, 1024.	4.1	7
74	The Regulatory Networks of Plant Responses to Abscisic Acid. Advances in Botanical Research, 2011, , 201-248.	1.1	6
75	Hetero-nuclear NMR-based Metabolomics. , 2006, , 93-101.		5
76	A unique system for regulating mitochondrial mRNA poly(A) status and stability in plants. Plant Signaling and Behavior, 2014, 9, e973809.	2.4	4
77	Life-Course Monitoring of Endogenous Phytohormone Levels under Field Conditions Reveals Diversity of Physiological States among Barley Accessions. Plant and Cell Physiology, 2020, 61, 1438-1448.	3.1	4
78	PARN-like Proteins Regulate Gene Expression in Land Plant Mitochondria by Modulating mRNA Polyadenylation. International Journal of Molecular Sciences, 2021, 22, 10776.	4.1	3
79	ahg12 is a dominant proteasome mutant that affects multiple regulatory systems for germination of Arabidopsis. Scientific Reports, 2016, 6, 25351.	3.3	1
80	Exploration of Life-Course Factors Influencing Phenotypic Outcomes in Crops. Plant and Cell Physiology, 2020, 61, 1381-1383.	3.1	1
81	New Mechanism of Abscisic Acid Signaling Cascade: Survival Strategy for Plants to Adapt to Growing Environmental Change. Kagaku To Seibutsu, 2019, 57, 736-742.	0.0	0
82	Ds Transposon Mutant Lines for Saturation Mutagenesis of the Arabidopsis genome. , 0, , 17-30.		0