

Tetsuya Higashiyama

List of Publications by Year in descending order

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121
papers

9,945
citations

38742

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h-index

38395

95
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122
all docs

122
docs citations

122
times ranked

9426
citing authors

#	ARTICLE	IF	CITATIONS
1	The <i>DROL1</i> subunit of U5 snRNP in the spliceosome is specifically required to splice AT-AC type introns in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2022, 109, 633-648.	5.7	5
2	Chemical synthesis of <i>Torenia</i> plant pollen tube attractant proteins by KAHA ligation. <i>RSC Chemical Biology</i> , 2022, 3, 721-727.	4.1	3
3	Quantification of Species-Preferential Micropylar Chemoattraction in <i>Arabidopsis</i> by Fluorescein Diacetate Staining of Pollen Tubes. <i>International Journal of Molecular Sciences</i> , 2022, 23, 2722.	4.1	0
4	Dynamics of the cell fate specifications during female gametophyte development in <i>Arabidopsis</i> . <i>PLoS Biology</i> , 2021, 19, e3001123.	5.6	26
5	Persistent directional growth capability in <i>Arabidopsis thaliana</i> pollen tubes after nuclear elimination from the apex. <i>Nature Communications</i> , 2021, 12, 2331.	12.8	8
6	Dynamic Rearrangement and Directional Migration of Tubular Vacuoles are Required for the Asymmetric Division of the <i>Arabidopsis</i> Zygote. <i>Plant and Cell Physiology</i> , 2021, 62, 1280-1289.	3.1	13
7	Three sex phenotypes in a haploid algal species give insights into the evolutionary transition to a self-compatible mating system*. <i>Evolution; International Journal of Organic Evolution</i> , 2021, 75, 2984-2993.	2.3	4
8	Seeing is Believing: Advances in Plant Imaging Technologies. <i>Plant and Cell Physiology</i> , 2021, 62, 1217-1220.	3.1	3
9	Dynamics of mitochondrial distribution during development and asymmetric division of rice zygotes. <i>Plant Reproduction</i> , 2021, , 1.	2.2	1
10	Fertilization-Coupled Sperm Nuclear Fusion Is Required for Normal Endosperm Nuclear Proliferation. <i>Plant and Cell Physiology</i> , 2020, 61, 29-40.	3.1	17
11	GPI-Anchored Proteins Cooperate in the Long Journey of the Pollen Tube. <i>Molecular Plant</i> , 2020, 13, 8-10.	8.3	2
12	Cell-cell adhesion in plant grafting is facilitated by Î²-1,4-glucanases. <i>Science</i> , 2020, 369, 698-702.	12.6	108
13	Characterization of the Nicotianamine Exporter ENA1 in Rice. <i>Frontiers in Plant Science</i> , 2019, 10, 502.	3.6	21
14	<i>Hoxa13</i> regulates expression of common <i>Hox</i> target genes involved in cartilage development to coordinate the expansion of the autopodal anlage. <i>Development Growth and Differentiation</i> , 2019, 61, 228-251.	1.5	13
15	Polar vacuolar distribution is essential for accurate asymmetric division of <i>Arabidopsis</i> zygotes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2338-2343.	7.1	71
16	A pharmacological study of <i>Arabidopsis</i> cell fusion between the persistent synergid and endosperm. <i>Journal of Cell Science</i> , 2018, 131, .	2.0	6
17	Arabinogalactan proteins and their sugar chains: functions in plant reproduction, research methods, and biosynthesis. <i>Plant Reproduction</i> , 2018, 31, 67-75.	2.2	45
18	Time-Course Transcriptomics Analysis Reveals Key Responses of Submerged Deepwater Rice to Flooding. <i>Plant Physiology</i> , 2018, 176, 3081-3102.	4.8	64

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19	Special issue on plant reproduction research in Asia. <i>Plant Reproduction</i> , 2018, 31, 1-2.	2.2	6
20	Development of the Mitsugal computer system to identify causal mutation with a high-throughput sequencer. <i>Plant Reproduction</i> , 2018, 31, 117-128.	2.2	14
21	Quantitative assessment of chemotropism in pollen tubes using microslit channel filters. <i>Biomicrofluidics</i> , 2018, 12, 024113.	2.4	10
22	Jasmonic acid facilitates flower opening and floral organ development through the upregulated expression of SIMYB21 transcription factor in tomato. <i>Bioscience, Biotechnology and Biochemistry</i> , 2018, 82, 292-303.	1.3	41
23	A Water-soluble Warped Nanographene: Synthesis and Applications for Photoinduced Cell Death. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 2874-2878.	13.8	102
24	MYB30 links ROS signaling, root cell elongation, and plant immune responses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E4710-E4719.	7.1	98
25	Plant Reproduction: Autocrine Machinery for the Long Journey of the Pollen Tube. <i>Current Biology</i> , 2018, 28, R266-R269.	3.9	11
26	Capacitation in Plant and Animal Fertilization. <i>Trends in Plant Science</i> , 2018, 23, 129-139.	8.8	12
27	pKAMA-ITACHI Vectors for Highly Efficient CRISPR/Cas9-Mediated Gene Knockout in <i>Arabidopsis thaliana</i> . <i>Plant and Cell Physiology</i> , 2017, 58, pcw191.	3.1	168
28	Transcriptional integration of paternal and maternal factors in the <i>Arabidopsis</i> zygote. <i>Genes and Development</i> , 2017, 31, 617-627.	5.9	114
29	Hormone Distribution and Transcriptome Profiles in Bamboo Shoots Provide Insights on Bamboo Stem Emergence and Growth. <i>Plant and Cell Physiology</i> , 2017, 58, 702-716.	3.1	50
30	Spatiotemporal deep imaging of syncytium induced by the soybean cyst nematode <i>Heterodera glycines</i> . <i>Protoplasma</i> , 2017, 254, 2107-2115.	2.1	19
31	Gametophytic Pollen Tube Guidance: Attractant Peptides, Gametic Controls, and Receptors. <i>Plant Physiology</i> , 2017, 173, 112-121.	4.8	100
32	Structure-Activity Relation of AMOR Sugar Molecule That Activates Pollen-Tubes for Ovular Guidance. <i>Plant Physiology</i> , 2017, 173, 354-363.	4.8	26
33	Pollen tube navigation can inspire microrobot design. <i>Science Robotics</i> , 2017, 2, .	17.6	3
34	Super-Photostable Phosphole-Based Dye for Multiple-Acquisition Stimulated Emission Depletion Imaging. <i>Journal of the American Chemical Society</i> , 2017, 139, 10374-10381.	13.7	120
35	Gene Regulatory Networks for the Haploid-to-Diploid Transition of <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2017, 175, 314-332.	4.8	42
36	Structural basis for receptor recognition of pollen tube attraction peptides. <i>Nature Communications</i> , 2017, 8, 1331.	12.8	55

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37	Fluorescent Labeling of the Cyst Nematode <i>Heterodera glycines</i> in Deep-Tissue Live Imaging. <i>Cytologia</i> , 2017, 82, 251-259.	0.6	0
38	The Restorer of fertility like 2 pentatricopeptide repeat protein and RNase P are required for the processing of mitochondrial <i>orf291</i> rRNA in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2016, 86, 504-513.	5.7	30
39	The end of temptation: the elimination of persistent synergid cell identity. <i>Current Opinion in Plant Biology</i> , 2016, 34, 122-126.	7.1	13
40	Cytoskeleton dynamics control the first asymmetric cell division in <i>Arabidopsis</i> zygote. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14157-14162.	7.1	129
41	The AMOR Arabinogalactan Sugar Chain Induces Pollen-Tube Competency to Respond to Ovular Guidance. <i>Current Biology</i> , 2016, 26, 1091-1097.	3.9	103
42	Loss of function at <i>RAE2</i> , a previously unidentified EPFL, is required for awnlessness in cultivated Asian rice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 8969-8974.	7.1	94
43	A glial K^{+}/Cl^{-} cotransporter modifies temperature-evoked dynamics in <i>Caenorhabditis elegans</i> sensory neurons. <i>Genes, Brain and Behavior</i> , 2016, 15, 429-440.	2.2	29
44	Cell fusion and nuclear fusion in plants. <i>Seminars in Cell and Developmental Biology</i> , 2016, 60, 127-135.	5.0	26
45	Pollen tube contents initiate ovule enlargement and enhance seed coat development without fertilization. <i>Science Advances</i> , 2016, 2, e1600554.	10.3	37
46	Fertilization-independent Cell-fusion between the Synergid and Central Cell in the Polycomb Mutant. <i>Cell Structure and Function</i> , 2016, 41, 121-125.	1.1	8
47	Visualization of Plant Sexual Reproduction in the Whole-mount Pistil by ClearSee. <i>Cytologia</i> , 2016, 81, 1-2.	0.6	5
48	Identification of Phosphoinositide-Binding Protein PATELLIN2 as a Substrate of Arabidopsis MPK4 MAP Kinase during Septum Formation in Cytokinesis. <i>Plant and Cell Physiology</i> , 2016, 57, 1744-1755.	3.1	39
49	Haspin has Multiple Functions in the Plant Cell Division Regulatory Network. <i>Plant and Cell Physiology</i> , 2016, 57, 848-861.	3.1	21
50	Tip-localized receptors control pollen tube growth and LURE sensing in <i>Arabidopsis</i> . <i>Nature</i> , 2016, 531, 245-248.	27.8	260
51	Direct Repression of Evening Genes by CIRCADIAN CLOCK-ASSOCIATED1 in the Arabidopsis Circadian Clock. <i>Plant Cell</i> , 2016, 28, 696-711.	6.6	227
52	A comprehensive strategy for identifying long-distance mobile peptides in xylem sap. <i>Plant Journal</i> , 2015, 84, 611-620.	5.7	51
53	Type IV Collagen Controls the Axogenesis of Cerebellar Granule Cells by Regulating Basement Membrane Integrity in Zebrafish. <i>PLoS Genetics</i> , 2015, 11, e1005587.	3.5	29
54	Peptide signaling in pollen tube guidance. <i>Current Opinion in Plant Biology</i> , 2015, 28, 127-136.	7.1	47

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55	Rare allele of a previously unidentified histone H4 acetyltransferase enhances grain weight, yield, and plant biomass in rice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 76-81.	7.1	236
56	Environment-sensitive Fluorescent Probe: A Benzophosphole Oxide with an Electron-Donating Substituent. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 4539-4543.	13.8	162
57	Generation of a homozygous fertilization-defective <i>gcs1</i> mutant by heat-inducible removal of a rescue gene. <i>Plant Reproduction</i> , 2015, 28, 33-46.	2.2	20
58	Live Imaging and Laser Disruption Reveal the Dynamics and Cell-Cell Communication During <i>Torenia fournieri</i> Female Gametophyte Development. <i>Plant and Cell Physiology</i> , 2015, 56, 1031-1041.	3.1	28
59	Two-photon imaging with longer wavelength excitation in intact <i>Arabidopsis</i> tissues. <i>Protoplasma</i> , 2015, 252, 1231-1240.	2.1	49
60	Chemotaxis assay of plant-parasitic nematodes on a gel-filled microchannel device. <i>Sensors and Actuators B: Chemical</i> , 2015, 221, 1483-1491.	7.8	19
61	Live-Cell Imaging and Optical Manipulation of <i>Arabidopsis</i> Early Embryogenesis. <i>Developmental Cell</i> , 2015, 34, 242-251.	7.0	132
62	Transcriptional repression by <i>MYB3R</i> proteins regulates plant organ growth. <i>EMBO Journal</i> , 2015, 34, 1992-2007.	7.8	128
63	Rapid Elimination of the Persistent Synergid through a Cell Fusion Mechanism. <i>Cell</i> , 2015, 161, 907-918.	28.9	111
64	The carboxyl-terminal tail of the stalk of <i>Arabidopsis</i> NACK1/HINKEL kinesin is required for its localization to the cell plate formation site. <i>Journal of Plant Research</i> , 2015, 128, 327-336.	2.4	14
65	Identification of mRNAs that Move Over Long Distances Using an RNA-Seq Analysis of <i>Arabidopsis/Nicotiana benthamiana</i> Heterografts. <i>Plant and Cell Physiology</i> , 2015, 56, 311-321.	3.1	104
66	RNA-Seq Analysis of the Response of the Halophyte, <i>Mesembryanthemum crystallinum</i> (Ice Plant) to High Salinity. <i>PLoS ONE</i> , 2015, 10, e0118339.	2.5	62
67	Poly(dimethylsiloxane)-based microdevices for studying plant reproduction. <i>Biochemical Society Transactions</i> , 2014, 42, 320-324.	3.4	5
68	An EAR-Dependent Regulatory Module Promotes Male Germ Cell Division and Sperm Fertility in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2014, 26, 2098-2113.	6.6	67
69	Growth assay of individual pollen tubes arrayed by microchannel device. <i>Microelectronic Engineering</i> , 2014, 118, 25-28.	2.4	12
70	Spatial distribution of the RABBIT EARS protein and effects of its ectopic expression in <i>Arabidopsis thaliana</i> flowers. <i>Planta</i> , 2014, 239, 707-715.	3.2	5
71	Ca ²⁺ -Activated Reactive Oxygen Species Production by <i>Arabidopsis</i> RbohH and RbohJ Is Essential for Proper Pollen Tube Tip Growth. <i>Plant Cell</i> , 2014, 26, 1069-1080.	6.6	243
72	Fabrication of microcage arrays to fix plant ovules for long-term live imaging and observation. <i>Sensors and Actuators B: Chemical</i> , 2014, 191, 178-185.	7.8	15

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73	Antisense gene inhibition by phosphorothioate antisense oligonucleotide in Arabidopsis pollen tubes. <i>Plant Journal</i> , 2014, 78, 516-526.	5.7	31
74	Increase in Invaginated Vacuolar Membrane Structure Caused by Plant Cell Expansion by Genotoxic Stress Induced by DNA Double-Strand Breaks. <i>Cytologia</i> , 2014, 79, 467-474.	0.6	7
75	Independent Control by Each Female Gamete Prevents the Attraction of Multiple Pollen Tubes. <i>Developmental Cell</i> , 2013, 25, 317-323.	7.0	133
76	Fertilization recovery system is dependent on the number of pollen grains for efficient reproduction in plants. <i>Plant Signaling and Behavior</i> , 2013, 8, e23690.	2.4	21
77	Acquisition of LURE-Binding Activity at the Pollen Tube Tip of <i>Torenia fournieri</i> . <i>Molecular Plant</i> , 2013, 6, 1074-1090.	8.3	34
78	Live-cell analysis of plant reproduction: Live-cell imaging, optical manipulation, and advanced microscopy technologies. <i>Development Growth and Differentiation</i> , 2013, 55, 462-473.	1.5	24
79	A microfluidic device for quantitative analysis of chemoattraction in plants. <i>RSC Advances</i> , 2013, 3, 22301.	3.6	33
80	The Simplest Integrated Multicellular Organism Unveiled. <i>PLoS ONE</i> , 2013, 8, e81641.	2.5	40
81	A Species-Specific Cluster of Defensin-Like Genes Encodes Diffusible Pollen Tube Attractants in Arabidopsis. <i>PLoS Biology</i> , 2012, 10, e1001449.	5.6	238
82	Transcriptional repressor PRR5 directly regulates clock-output pathways. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 17123-17128.	7.1	253
83	Arabidopsis ASYMMETRIC LEAVES2 protein required for leaf morphogenesis consistently forms speckles during mitosis of tobacco BY-2 cells via signals in its specific sequence. <i>Journal of Plant Research</i> , 2012, 125, 661-668.	2.4	20
84	DNA Methylation Dynamics during Sexual Reproduction in Arabidopsis thaliana. <i>Current Biology</i> , 2012, 22, 1825-1830.	3.9	214
85	Fertilization Recovery after Defective Sperm Cell Release in Arabidopsis. <i>Current Biology</i> , 2012, 22, 1084-1089.	3.9	118
86	Double fertilization on the move. <i>Current Opinion in Plant Biology</i> , 2012, 15, 70-77.	7.1	76
87	HMG Domain Containing SSRP1 Is Required for DNA Demethylation and Genomic Imprinting in Arabidopsis. <i>Developmental Cell</i> , 2011, 21, 589-596.	7.0	87
88	DNA packaging proteins Glom and Glom2 coordinately organize the mitochondrial nucleoid of Physarum polycephalum. <i>Mitochondrion</i> , 2011, 11, 575-586.	3.4	15
89	Isolation of Gametophytic Cells and Identification of Their Cell-Specific Markers in <i>Torenia fournieri</i> , <i>T. concolor</i> and <i>Lindernia micrantha</i> . <i>Cytologia</i> , 2011, 76, 177-184.	0.6	4
90	Attraction of tip-growing pollen tubes by the female gametophyte. <i>Current Opinion in Plant Biology</i> , 2011, 14, 614-621.	7.1	53

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91	Live-Cell Imaging Reveals the Dynamics of Two Sperm Cells during Double Fertilization in <i>Arabidopsis thaliana</i> . <i>Current Biology</i> , 2011, 21, 497-502.	3.9	187
92	Diverse Functions of Plant Peptides: Entering a New Phase. <i>Plant and Cell Physiology</i> , 2011, 52, 1-4.	3.1	32
93	Identification and characterization of TcCRP1, a pollen tube attractant from <i>Torenia concolor</i> . <i>Annals of Botany</i> , 2011, 108, 739-747.	2.9	57
94	Chemical Visualization of an Attractant Peptide, LURE. <i>Plant and Cell Physiology</i> , 2011, 52, 49-58.	3.1	27
95	Pollen Tube Guidance by Attractant Molecules: LUREs. <i>Cell Structure and Function</i> , 2010, 35, 45-52.	1.1	25
96	Peptide Signaling in Pollen-Pistil Interactions. <i>Plant and Cell Physiology</i> , 2010, 51, 177-189.	3.1	96
97	Defensin-like polypeptide LUREs are pollen tube attractants secreted from synergid cells. <i>Nature</i> , 2009, 458, 357-361.	27.8	548
98	New Protein Pmn34 with an Exonuclease Motif Localizes in the Mitochondrial Nucleoid Periphery of <i>Physarum polycephalum</i> . <i>Cytologia</i> , 2009, 74, 401-407.	0.6	3
99	Gametophytic pollen tube guidance. <i>Sexual Plant Reproduction</i> , 2008, 21, 17-26.	2.2	115
100	Double fertilization “caught in the act”. <i>Trends in Plant Science</i> , 2008, 13, 437-443.	8.8	166
101	Mitochondrial Dynamics in Plant Male Gametophyte Visualized by Fluorescent Live Imaging. <i>Plant and Cell Physiology</i> , 2008, 49, 1074-1083.	3.1	44
102	Distinct Dynamics of HISTONE3 Variants between the Two Fertilization Products in Plants. <i>Current Biology</i> , 2007, 17, 1032-1037.	3.9	252
103	GENERATIVE CELL SPECIFIC 1 is essential for angiosperm fertilization. <i>Nature Cell Biology</i> , 2006, 8, 64-71.	10.3	413
104	Species Preferentiality of the Pollen Tube Attractant Derived from the Synergid Cell of <i>Torenia fournieri</i> . <i>Plant Physiology</i> , 2006, 142, 481-491.	4.8	82
105	Active digestion of sperm mitochondrial DNA in single living sperm revealed by optical tweezers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 1382-1387.	7.1	139
106	PHYLOGENETIC IMPLICATIONS OF THE CAD COMPLEX FROM THE PRIMITIVE RED ALGA <i>CYANIDIOSCHYZON MEROLAE</i> (CYANIDIALES, RHODOPHYTA)1. <i>Journal of Phycology</i> , 2005, 41, 652-657.	2.3	10
107	Genome sequence of the ultrasmall unicellular red alga <i>Cyanidioschyzon merolae</i> 10D. <i>Nature</i> , 2004, 428, 653-657.	27.8	1,016
108	Cyanobacterial Genes Transmitted to the Nucleus Before Divergence of Red Algae in the Chromista. <i>Journal of Molecular Evolution</i> , 2004, 59, 103-113.	1.8	17

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109	Regulation of <i>Brassica rapa</i> chloroplast proliferation in vivo and in cultured leaf disks. <i>Protoplasma</i> , 2003, 222, 139-148.	2.1	7
110	Pollen-tube guidance: beacons from the female gametophyte. <i>Current Opinion in Plant Biology</i> , 2003, 6, 36-41.	7.1	115
111	Identification of higher plant GlsA, a putative morphogenesis factor of gametic cells. <i>Biochemical and Biophysical Research Communications</i> , 2003, 306, 564-569.	2.1	15
112	A Plant-Specific Dynamin-Related Protein Forms a Ring at the Chloroplast Division Site. <i>Plant Cell</i> , 2003, 15, 655-665.	6.6	204
113	An mt+ gamete-specific nuclease that targets mt- chloroplasts during sexual reproduction in <i>C. reinhardtii</i> . <i>Genes and Development</i> , 2002, 16, 1116-1128.	5.9	73
114	Pelargonium embryogenesis: cytological investigations of organelles in early embryogenesis from the egg to the two-celled embryo. <i>Sexual Plant Reproduction</i> , 2002, 15, 1-12.	2.2	14
115	Pollen Tube Attraction by the Synergid Cell. <i>Science</i> , 2001, 293, 1480-1483.	12.6	363
116	Explosive Discharge of Pollen Tube Contents in <i>Torenia fournieri</i> . <i>Plant Physiology</i> , 2000, 122, 11-14.	4.8	56
117	Semi-Automatic Laser Beam Microdissection of the Y Chromosome and Analysis of Y Chromosome DNA in a Dioecious Plant, <i>Silene latifolia</i> . <i>Plant and Cell Physiology</i> , 1999, 40, 60-68.	3.1	70
118	The active digestion of uniparental chloroplast DNA in a single zygote of <i>Chlamydomonas reinhardtii</i> is revealed by using the optical tweezer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 12577-12582.	7.1	78
119	The biparental transmission of the mitochondrial genome in <i>Chlamydomonas reinhardtii</i> visualized in living cells. <i>European Journal of Cell Biology</i> , 1998, 77, 124-133.	3.6	52
120	DNA Staining for Fluorescence and Laser Confocal Microscopy. <i>Journal of Histochemistry and Cytochemistry</i> , 1997, 45, 49-53.	2.5	298
121	Optical isolation of individual mitochondria of <i>Physarum polycephalum</i> for PCR analysis. <i>Protoplasma</i> , 1996, 194, 275-279.	2.1	9