Takayuki Kohchi

List of Publications by Citations

131 papers	7,760 citations	42 h-index	86 g-index
151 ext. papers	10,103 ext. citations	6.9 avg, IF	5.64 L-index

#	Paper	IF	Citations
131	Chloroplast gene organization deduced from complete sequence of liverwort Marchantia polymorpha chloroplast DNA. *Nature*, **1986**, 322, 572-574	50.4	1430
130	Gene organization deduced from the complete sequence of liverwort Marchantia polymorpha mitochondrial DNA. A primitive form of plant mitochondrial genome. *Journal of Molecular Biology*, **1992**, 223, 1-7	6.5	545
129	Insights into Land Plant Evolution Garnered from the Marchantia polymorpha Genome. *Cell*, **2017**, 171, 287-304.e15	56.2	538
128	The Arabidopsis photomorphogenic mutant hy1 is deficient in phytochrome chromophore biosynthesis as a result of a mutation in a plastid heme oxygenase. *Plant Cell*, **1999**, 11, 335-48	11.6	284
127	Agrobacterium-mediated transformation of the haploid liverwort Marchantia polymorpha L., an emerging model for plant biology. *Plant and Cell Physiology*, **2008**, 49, 1084-91	4.9	209
126	The Arabidopsis HY2 gene encodes phytochromobilin synthase, a ferredoxin-dependent biliverdin reductase. *Plant Cell*, **2001**, 13, 425-36	11.6	209
125	Functional genomic analysis of the HY2 family of ferredoxin-dependent bilin reductases from oxygenic photosynthetic organisms. *Plant Cell*, **2001**, 13, 965-78	11.6	209
124	CRISPR/Cas9-mediated targeted mutagenesis in the liverwort Marchantia polymorpha L. *Plant and Cell Physiology*, **2014**, 55, 475-81	4.9	179
123	Efficient Agrobacterium-mediated transformation of the liverwort Marchantia polymorpha using regenerating thalli. *Bioscience, Biotechnology and Biochemistry*, **2013**, 77, 167-72	2.1	137
122	Expression and biochemical properties of a ferredoxin-dependent heme oxygenase required for phytochrome chromophore synthesis. *Plant Physiology*, **2002**, 130, 1958-66	6.6	136
121	Development of Gateway Binary Vector Series with Four Different Selection Markers for the Liverwort Marchantia polymorpha. *PLoS ONE*, **2015**, 10, e0138876	3.7	122
120	Application of Lifeact reveals F-actin dynamics in Arabidopsis thaliana and the liverwort, Marchantia polymorpha. *Plant and Cell Physiology*, **2009**, 50, 1041-8	4.9	114
119	Stomatal guard cells co-opted an ancient ABA-dependent desiccation survival system to regulate stomatal closure. *Current Biology*, **2015**, 25, 928-35	6.3	113
118	Molecular Genetic Tools and Techniques for Marchantia polymorpha Research. *Plant and Cell Physiology*, **2016**, 57, 262-70	4.9	112
117	Gene organization of the liverwort Y chromosome reveals distinct sex chromosome evolution in a haploid system. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 6472-7	11.5	107
116	Ligand-receptor co-evolution shaped the jasmonate pathway in land plants. *Nature Chemical Biology*, **2018**, 14, 480-488	11.7	105
115	Homologous recombination-mediated gene targeting in the liverwort Marchantia polymorpha L. *Scientific Reports*, **2013**, 3, 1532	4.9	94

114	Auxin-Mediated Transcriptional System with a Minimal Set of Components Is Critical for Morphogenesis through the Life Cycle in Marchantia polymorpha. *PLoS Genetics*, **2015**, 11, e1005084	6	93
113	Metabolic engineering to produce phytochromes with phytochromobilin, phycocyanobilin, or phycoerythrobilin chromophore in Escherichia coli. *FEBS Letters*, **2006**, 580, 1333-8	3.8	87
112	Evolutionarily conserved regulatory mechanisms of abscisic acid signaling in land plants: characterization of ABSCISIC ACID INSENSITIVE1-like type 2C protein phosphatase in the liverwort Marchantia polymorpha. *Plant Physiology*, **2010**, 152, 1529-43	6.6	85
111	Cyanobacteriochrome TePixJ of Thermosynechococcus elongatus harbors phycoviolobilin as a chromophore. *Plant and Cell Physiology*, **2007**, 48, 1385-90	4.9	84
110	Structure and organization of Marchantia polymorpha chloroplast genome. IV. Inverted repeat and small single copy regions. *Journal of Molecular Biology*, **1988**, 203, 353-72	6.5	77
109	Direct transformation of the liverwort Marchantia polymorpha L. by particle bombardment using immature thalli developing from spores. *Plant Cell Reports*, **2008**, 27, 1467-73	5.1	76
108	Efficient CRISPR/Cas9-based genome editing and its application to conditional genetic analysis in Marchantia polymorpha. *PLoS ONE*, **2018**, 13, e0205117	3.7	75
107	Chromatin Organization in Early Land Plants Reveals an Ancestral Association between H3K27me3, Transposons, and Constitutive Heterochromatin. *Current Biology*, **2020**, 30, 573-588.e7	6.3	72
106	Auxin Produced by the Indole-3-Pyruvic Acid Pathway Regulates Development and Gemmae Dormancy in the Liverwort Marchantia polymorpha. *Plant Cell*, **2015**, 27, 1650-69	11.6	71
105	Composition and physiological function of the chloroplast NADH dehydrogenase-like complex in Marchantia polymorpha. *Plant Journal*, **2012**, 72, 683-93	6.9	70
104	Coding sequences for chloroplast ribosomal protein S12 from the liverwort, Marchantia polymorpha, are separated far apart on the different DNA strands. *FEBS Letters*, **1986**, 198, 11-15	3.8	66
103	RSL Class I Genes Controlled the Development of Epidermal Structures in the Common Ancestor of Land Plants. *Current Biology*, **2016**, 26, 93-9	6.3	64
102	Comparison of the MpEF1 and CaMV35 promoters for application in Marchantia polymorpha overexpression studies. *Transgenic Research*, **2014**, 23, 235-44	3.3	63
101	Co-option of a photoperiodic growth-phase transition system during land plant evolution. *Nature Communications*, **2014**, 5, 3668	17.4	62
100	An Evolutionarily Conserved Plant RKD Factor Controls Germ Cell Differentiation. *Current Biology*, **2016**, 26, 1775-1781	6.3	58
99	Efficient synthesis of phycocyanobilin in mammalian cells for optogenetic control of cell signaling. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11962-11967	11.5	56
98	The phytochrome-interacting vascular plant one-zinc finger1 and VOZ2 redundantly regulate flowering in Arabidopsis. *Plant Cell*, **2012**, 24, 3248-63	11.6	56
97	A Single JAZ Repressor Controls the Jasmonate Pathway in Marchantia polymorpha. *Molecular Plant*, **2019**, 12, 185-198	14.4	55

96	Visualization of auxin-mediated transcriptional activation using a common auxin-responsive reporter system in the liverwort Marchantia polymorpha. *Journal of Plant Research*, **2012**, 125, 643-51	2.6	53
95	Early evolution of the land plant circadian clock. *New Phytologist*, **2017**, 216, 576-590	9.8	48
94	Phototropin encoded by a single-copy gene mediates chloroplast photorelocation movements in the liverwort Marchantia polymorpha. *Plant Physiology*, **2014**, 166, 411-27	6.6	48
93	Phytochrome Signaling Is Mediated by PHYTOCHROME INTERACTING FACTOR in the Liverwort Marchantia polymorpha. *Plant Cell*, **2016**, 28, 1406-21	11.6	47
92	Functional analysis of allene oxide cyclase, MpAOC, in the liverwort Marchantia polymorpha. *Phytochemistry*, **2015**, 116, 48-56	4	47
91	SNARE Molecules in Marchantia polymorpha: Unique and Conserved Features of the Membrane Fusion Machinery. *Plant and Cell Physiology*, **2016**, 57, 307-24	4.9	46
90	Characterization of the photoactive GAF domain of the CikA homolog (SyCikA, Slr1969) of the cyanobacterium Synechocystis sp. PCC 6803. *Photochemical and Photobiological Sciences*, **2008**, 7, 1253-9	4.2	46
89	Production of arachidonic and eicosapentaenoic acids in plants using bryophyte fatty acid Delta6-desaturase, Delta6-elongase, and Delta5-desaturase genes. *Bioscience, Biotechnology and Biochemistry*, **2008**, 72, 435-44	2.1	42
88	Simple and efficient plastid transformation system for the liverwort Marchantia polymorpha L. suspension-culture cells. *Transgenic Research*, **2007**, 16, 41-9	3.3	41
87	Biochemical characterization of allene oxide synthases from the liverwort Marchantia polymorpha and green microalgae Klebsormidium flaccidum provides insight into the evolutionary divergence of the plant CYP74 family. *Planta*, **2015**, 242, 1175-86	4.7	38
86	The Naming of Names: Guidelines for Gene Nomenclature in Marchantia. *Plant and Cell Physiology*, **2016**, 57, 257-61	4.9	38
85	Essential role of the E3 ubiquitin ligase nopperabo1 in schizogenous intercellular space formation in the liverwort Marchantia polymorpha. *Plant Cell*, **2013**, 25, 4075-84	11.6	38
84	An Evolutionarily Conserved Abscisic Acid Signaling Pathway Regulates Dormancy in the Liverwort Marchantia polymorpha. *Current Biology*, **2018**, 28, 3691-3699.e3	6.3	38
83	Phytochrome-mediated regulation of cell division and growth during regeneration and sporeling development in the liverwort Marchantia polymorpha. *Journal of Plant Research*, **2015**, 128, 407-21	2.6	37
82	Transcriptional Framework of Male Gametogenesis in the Liverwort Marchantia polymorpha L. *Plant and Cell Physiology*, **2016**, 57, 325-38	4.9	37
81	Identification of miRNAs and Their Targets in the Liverwort Marchantia polymorpha by Integrating RNA-Seq and Degradome Analyses. *Plant and Cell Physiology*, **2016**, 57, 339-58	4.9	36
80	Cold-induced organelle relocation in the liverwort Marchantia polymorpha L. *Plant, Cell and Environment*, **2013**, 36, 1520-8	8.4	36
79	Conditional Gene Expression/Deletion Systems for Marchantia polymorpha Using its Own Heat-Shock Promoter and Cre/loxP-Mediated Site-Specific Recombination. *Plant and Cell Physiology* , **2016**, 57, 271-80	4.9	33

78	Profiling and Characterization of Small RNAs in the Liverwort, Marchantia polymorpha, Belonging to the First Diverged Land Plants. *Plant and Cell Physiology*, **2016**, 57, 359-72	4.9	33
77	An Arabidopsis MADS-box protein, AGL24, is specifically bound to and phosphorylated by meristematic receptor-like kinase (MRLK). *Plant and Cell Physiology*, **2003**, 44, 735-42	4.9	33
76	Evolution of nuclear auxin signaling: lessons from genetic studies with basal land plants. *Journal of Experimental Botany*, **2018**, 69, 291-301	7	33
75	Generative Cell Specification Requires Transcription Factors Evolutionarily Conserved in Land Plants. *Current Biology*, **2018**, 28, 479-486.e5	6.3	31
74	FAMA is an essential component for the differentiation of two distinct cell types, myrosin cells and guard cells, in Arabidopsis. *Plant Cell*, **2014**, 26, 4039-52	11.6	31
73	The Roles of the Sole Activator-Type Auxin Response Factor in Pattern Formation of Marchantia polymorpha. *Plant and Cell Physiology*, **2017**, 58, 1642-1651	4.9	31
72	The molecular basis of heme oxygenase deficiency in the pcd1 mutant of pea. *FEBS Journal*, **2006**, 273, 2594-606	5.7	31
71	Design principles of a minimal auxin response system. *Nature Plants*, **2020**, 6, 473-482	11.5	30
70	Occurrence of brassinosteroids in non-flowering land plants, liverwort, moss, lycophyte and fern. *Phytochemistry*, **2017**, 136, 46-55	4	29
69	A -acting bidirectional transcription switch controls sexual dimorphism in the liverwort. *EMBO Journal*, **2019**, 38,	13	29
68	Characterization of the plasma membrane H+-ATPase in the liverwort Marchantia polymorpha. *Plant Physiology*, **2012**, 159, 826-34	6.6	28
67	Complementation of phytochrome chromophore-deficient Arabidopsis by expression of phycocyanobilin:ferredoxin oxidoreductase. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 1099-104	11.5	28
66	Transcription factor DUO1 generated by neo-functionalization is associated with evolution of sperm differentiation in plants. *Nature Communications*, **2018**, 9, 5283	17.4	28
65	Control of proliferation in the haploid meristem by CLE peptide signaling in Marchantia polymorpha. *PLoS Genetics*, **2019**, 15, e1007997	6	27
64	The Elm1 (ZmHy2) gene of maize encodes a phytochromobilin synthase. *Plant Physiology*, **2004**, 136, 2771-81	6.6	27
63	The tomato photomorphogenetic mutant, aurea, is deficient in phytochromobilin synthase for phytochrome chromophore biosynthesis. *Plant and Cell Physiology*, **2005**, 46, 661-5	4.9	27
62	RPT2/NCH1 subfamily of NPH3-like proteins is essential for the chloroplast accumulation response in land plants. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 10424-9	11.5	25
61	An adenylyl cyclase with a phosphodiesterase domain in basal plants with a motile sperm system. *Scientific Reports*, **2016**, 6, 39232	4.9	24

60	Building new insights in plant gametogenesis from an evolutionary perspective. *Nature Plants*, **2019**, 5, 663-669	11.5	23
59	Characterization of four nuclear-encoded plastid RNA polymerase sigma factor genes in the liverwort Marchantia polymorpha: blue-light- and multiple stress-responsive SIG5 was acquired early in the emergence of terrestrial plants. *Plant and Cell Physiology*, **2013**, 54, 1736-48	4.9	23
58	Arabidopsis ZIM, a plant-specific GATA factor, can function as a transcriptional activator. *Bioscience, Biotechnology and Biochemistry*, **2003**, 67, 2495-7	2.1	22
57	Biosynthesis of riccionidins and marchantins is regulated by R2R3-MYB transcription factors in Marchantia polymorpha. *Journal of Plant Research*, **2018**, 131, 849-864	2.6	22
56	Induction of Multichotomous Branching by CLAVATA Peptide in Marchantia polymorpha. *Current Biology*, **2020**, 30, 3833-3840.e4	6.3	21
55	Cytokinin Signaling Is Essential for Organ Formation in Marchantia polymorpha. *Plant and Cell Physiology*, **2019**, 60, 1842-1854	4.9	19
54	Eukaryotic Components Remodeled Chloroplast Nucleoid Organization during the Green Plant Evolution. *Genome Biology and Evolution*, **2015**, 8, 1-16	3.9	19
53	Reproductive Induction is a Far-Red High Irradiance Response that is Mediated by Phytochrome and PHYTOCHROME INTERACTING FACTOR in Marchantia polymorpha. *Plant and Cell Physiology*, **2019**, 60, 1136-1145	4.9	18
52	Cryopreservation of Gemmae from the Liverwort Marchantia polymorpha L. *Plant and Cell Physiology*, **2016**, 57, 300-6	4.9	18
51	Evolutionary origin of phytochrome responses and signaling in land plants. *Plant, Cell and Environment*, **2017**, 40, 2502-2508	8.4	17
50	Isolation and functional characterization of fatty acid delta5-elongase gene from the liverwort Marchantia polymorpha L. *FEBS Letters*, **2006**, 580, 149-54	3.8	17
49	Splicing of group II introns in mRNAs coding for cytochrome b 6 and subunit IV in the liverwort Marchantia polymorpha chloroplast genome Exon specifying a region coding for two genes with the spacer region. *FEBS Letters*, **1987**, 220, 61-66	3.8	17
48	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs. *PLoS Biology*, **2019**, 17, e3000560	9.7	17
47	Abscisic acid-induced gene expression in the liverwort Marchantia polymorpha is mediated by evolutionarily conserved promoter elements. *Physiologia Plantarum*, **2016**, 156, 407-20	4.6	16
46	An evolutionarily conserved NIMA-related kinase directs rhizoid tip growth in the basal land plant. *Development (Cambridge)*, **2018**, 145,	6.6	15
45	Abscisic acid induces biosynthesis of bisbibenzyls and tolerance to UV-C in the liverwort Marchantia polymorpha. *Phytochemistry*, **2015**, 117, 547-553	4	14
44	Subfunctionalization of sigma factors during the evolution of land plants based on mutant analysis of liverwort (Marchantia polymorpha L.) MpSIG1. *Genome Biology and Evolution*, **2013**, 5, 1836-48	3.9	14
43	GEMMA CUP-ASSOCIATED MYB1, an Ortholog of Axillary Meristem Regulators, Is Essential in Vegetative Reproduction in Marchantia polymorpha. *Current Biology*, **2019**, 29, 3987-3995.e5	6.3	14

42	Marchantia. *Current Biology*, **2016**, 26, R186-7	6.3	13
41	An Early Arising Role of the MicroRNA156/529-SPL Module in Reproductive Development Revealed by the Liverwort Marchantia polymorpha. *Current Biology*, **2019**, 29, 3307-3314.e5	6.3	12
40	Evolutionary insights into photoregulation of the cell cycle in the green lineage. *Current Opinion in Plant Biology*, **2013**, 16, 630-7	9.9	12
39	Plastid transformation of sporelings and suspension-cultured cells from the liverwort Marchantia polymorpha L. *Methods in Molecular Biology*, **2014**, 1132, 439-47	1.4	12
38	The liverwort oil body is formed by redirection of the secretory pathway. *Nature Communications*, **2020**, 11, 6152	17.4	12
37	Loss of CG Methylation in Marchantia polymorpha Causes Disorganization of Cell Division and Reveals Unique DNA Methylation Regulatory Mechanisms of Non-CG Methylation. *Plant and Cell Physiology*, **2018**, 59, 2421-2431	4.9	11
36	ANGUSTIFOLIA contributes to the regulation of three-dimensional morphogenesis in the liverwort. *Development (Cambridge)*, **2018**, 145,	6.6	11
35	Development and Molecular Genetics of. *Annual Review of Plant Biology*, **2021**, 72, 677-702	30.7	11
34	Physiological function of photoreceptor UVR8 in UV-B tolerance in the liverwort Marchantia polymorpha. *Planta*, **2019**, 249, 1349-1364	4.7	10
33	The RopGEF KARAPPO Is Essential for the Initiation of Vegetative Reproduction in Marchantia polymorpha. *Current Biology*, **2019**, 29, 3525-3531.e7	6.3	9
32	DRP3 and ELM1 are required for mitochondrial fission in the liverwort Marchantia polymorpha. *Scientific Reports*, **2017**, 7, 4600	4.9	9
31	Positional cues regulate dorsal organ formation in the liverwort Marchantia polymorpha. *Journal of Plant Research*, **2020**, 133, 311-321	2.6	8
30	Novel gateway binary vectors for rapid tripartite DNA assembly and promoter analysis with various reporters and tags in the liverwort Marchantia polymorpha. *PLoS ONE*, **2018**, 13, e0204964	3.7	8
29	Dynamic reorganization of the endomembrane system during spermatogenesis in Marchantia polymorpha. *Journal of Plant Research*, **2017**, 130, 433-441	2.6	7
28	Biosynthesis of chromophores for phytochrome and related photoreceptors. *Plant Biotechnology*, **2005**, 22, 409-413	1.3	7
27	Efficient CRISPR/Cas9-based genome editing and its application to conditional genetic analysis in Marchantia polymorpha		6
26	Identification and Biochemical Characterization of the Serine Biosynthetic Enzyme 3-Phosphoglycerate Dehydrogenase in. *Frontiers in Plant Science*, **2018**, 9, 956	6.2	6
25	Cryopreservation of Marchantia polymorpha spermatozoa. *Journal of Plant Research*, **2018**, 131, 1047-1054	2.6	5

24	Identification of the sex-determining factor in the liverwort Marchantia polymorpha reveals unique evolution of sex chromosomes in a haploid system. *Current Biology*, **2021**,	6.3	5
23	Major components of the KARRIKIN INSENSITIVE2-dependent signaling pathway are conserved in the liverwort Marchantia polymorpha. *Plant Cell*, **2021**, 33, 2395-2411	11.6	5
22	Regulation of the Poly(A) Status of Mitochondrial mRNA by Poly(A)-Specific Ribonuclease Is Conserved among Land Plants. *Plant and Cell Physiology*, **2020**, 61, 470-480	4.9	4
21	Auxin Biology in Bryophyta: A Simple Platform with Versatile Functions. *Cold Spring Harbor Perspectives in Biology*, **2021**, 13,	10.2	4
20	Coordination between growth and stress responses by DELLA in the liverwort Marchantia polymorpha. *Current Biology*, **2021**, 31, 3678-3686.e11	6.3	4
19	Cytokinin signaling coordinates development of diverse organs in. *Plant Signaling and Behavior*, **2019**, 14, 1668232	2.5	3
18	Deep evolutionary origin of gamete-directed zygote activation by KNOX/BELL transcription factors in green plants		3
17	Regulation of Photosynthetic Carbohydrate Metabolism by a Raf-Like Kinase in the Liverwort Marchantia polymorpha. *Plant and Cell Physiology*, **2020**, 61, 631-643	4.9	2
16	Deep evolutionary origin of gamete-directed zygote activation by KNOX/BELL transcription factors in green plants. *ELife*, **2021**, 10,	8.9	2
15	Phytochrome and Light Signaling in Marchantia. *Methods in Molecular Biology*, **2019**, 2026, 215-223	1.4	1
14	Diminished Auxin Signaling Triggers Cellular Reprogramming by Inducing a Regeneration Factor in the Liverwort Marchantia polymorpha.. *Plant and Cell Physiology*, **2022**,	4.9	1
13	Improved clearing method contributes to deep imaging of plant organs.. *Communications Biology*, **2022**, 5, 12	6.7	1
12	Fungal-Type Terpene Synthases in Marchantia polymorpha Are Involved in Sesquiterpene Biosynthesis in Oil Body Cells. *Plant and Cell Physiology*, **2021**, 62, 528-537	4.9	1
11	A plant-specific DYRK kinase DYRKP coordinates cell morphology in Marchantia polymorpha. *Journal of Plant Research*, **2021**, 134, 1265-1277	2.6	1
10	A glycogen synthase kinase 3-like kinase MpGSK regulates cell differentiation in <i>Marchantia polymorpha</i>. *Plant Biotechnology*, **2022**, 39, 65-72	1.3	1
9	Migration of prospindle before the first asymmetric division in germinating spore of <i>Marchantia polymorpha</i>. *Plant Biotechnology*, **2022**, 39, 5-12	1.3	1
8	Observation of Phototropic Responses in the Liverwort Marchantia polymorpha. *Methods in Molecular Biology*, **2019**, 1924, 53-61	1.4	
7	Plastid Transformation of Sporelings from the Liverwort Marchantia polymorpha L. *Methods in Molecular Biology*, **2021**, 2317, 333-341	1.4	

List of Publications

6 A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560

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