Toshihisa Kotake

List of Publications by Year
in descending order

86	3,322	109264	161767
papers	citations	35 h-index	54 g-index

88	88	88	3362
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Arabidopsis TERMINAL FLOWER 2 Gene Encodes a Heterochromatin Protein 1 Homolog and Represses both FLOWERING LOCUS T to Regulate Flowering Time and Several Floral Homeotic Genes. Plant and Cell Physiology, 2003, 44, 555-564.	1.5	214
2	Î²-Galactosyl Yariv Reagent Binds to the Î²-1,3-Galactan of Arabinogalactan Proteins Â Â. Plant Physiology, 2013, 161, 1117-1126.	2.3	142
3	Structural Characterization of Arabidopsis Leaf Arabinogalactan Polysaccharides Â. Plant Physiology, 2012, 160, 653-666.	2.3	132
4	A Synthetic Glycan Microarray Enables Epitope Mapping of Plant Cell Wall Glycan-Directed Antibodies. Plant Physiology, 2017, 175, 1094-1104.	2.3	117
5	UDP-sugar Pyrophosphorylase with Broad Substrate Specificity Toward Various Monosaccharide 1-Phosphates from Pea Sprouts. Journal of Biological Chemistry, 2004, 279, 45728-45736.	1.6	110
6	The AMOR Arabinogalactan Sugar Chain Induces Pollen-Tube Competency to Respond to Ovular Guidance. Current Biology, 2016, 26, 1091-1097.	1.8	103
7	Carbohydrate structural analysis of wheat flour arabinogalactan protein. Carbohydrate Research, 2010, 345, 2648-2656.	1.1	101
8	Molecular Cloning of a Î²-Galactosidase from Radish That Specifically Hydrolyzes Î²-(1â†'3)- and Î²-(1â†'6)-Galactosyl Residues of Arabinogalactan Protein. Plant Physiology, 2005, 138, 1563-1576.	2.3	100
9	Rice Brittle culm 6 encodes a dominant-negative form of CesA protein that perturbs cellulose synthesis in secondary cell walls. Journal of Experimental Botany, 2011, 62, 2053-2062.	2.4	95
10	A Î²â€“glucuronosyltransferase from <scp>A</scp>rabidopsis thaliana involved in biosynthesis of typeÂ<scp>II</scp> arabinogalactan has a role in cell elongation during seedling growth. Plant Journal, 2013, 76, 1016-1029.	2.8	84
11	Properties and Physiological Functions of UDP-Sugar Pyrophosphorylase inArabidopsis. Bioscience, Biotechnology and Biochemistry, 2007, 71, 761-771.	0.6	83
12	A galactosyltransferase acting on arabinogalactan protein glycans is essential for embryo development in <scp>A</scp>rabidopsis. Plant Journal, 2013, 76, 128-137.	2.8	80
13	An Exo-Î²-1,3-galactanase Having a Novel Î²-1,3-Galactan-bindingModule from Phanerochaetechrysosporium. Journal of Biological Chemistry, 2005, 280, 25820-25829.	1.6	79
14	Rice BRITTLE CULM 3 (BC3) encodes a classical dynamin OsDRP2B essential for proper secondary cell wall synthesis. Planta, 2010, 232, 95-108.	1.6	68
15	Calcium Binding by Arabinogalactan Polysaccharides Is Important for Normal Plant Development. Plant Cell, 2020, 32, 3346-3369.	3.1	65
16	The GLABRA2 homeodomain protein directly regulates CESA5 and XTH17 gene expression in Arabidopsis roots. Plant Journal, 2009, 60, 564-574.	2.8	62
17	The Patterned Structure of Galactoglucomannan Suggests It May Bind to Cellulose in Seed Mucilage. Plant Physiology, 2018, 178, 1011-1026.	2.3	62
18	Rice BRITTLE CULM 5 (BRITTLE NODE) is Involved in Secondary Cell Wall Formation in the Sclerenchyma Tissue of Nodes. Plant and Cell Physiology, 2009, 50, 1886-1897.	1.5	60

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19	Molecular cloning and expression in Escherichia coli of a Trichoderma viride endo-beta-(1) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	1.7	57
20	Metabolism of l-arabinose in plants. Journal of Plant Research, 2016, 129, 781-792.	1.2	57
21	Properties of family 79 Î²-glucuronidases that hydrolyze Î²-glucuronosyl and 4-O-methyl-Î²-glucuronosyl residues of arabinogalactan-protein. Carbohydrate Research, 2008, 343, 1191-1201.	1.1	54
22	Precise estimation of genomic regions controlling lodging resistance using a set of reciprocal chromosome segment substitution lines in rice. Scientific Reports, 2016, 6, 30572.	1.6	53
23	A Bifunctional Enzyme with L-Fucokinase and GDP-L-fucose Pyrophosphorylase Activities Salvages Free L-Fucose in Arabidopsis. Journal of Biological Chemistry, 2008, 283, 8125-8135.	1.6	50
24	KONJAC1 and 2 Are Key Factors for GDP-Mannose Generation and Affect l-Ascorbic Acid and Glucomannan Biosynthesis in Arabidopsis. Plant Cell, 2015, 27, 3397-3409.	3.1	48
25	Purification and Characterization of Wall-bound Exo-l,3-Â-D-Glucanase from Barley (Hordeum vulgare) Tj ETQq1 1 0.784314 rgBT /Ove	1.5	47
26	Auxin-Induced Elongation Growth and Expressions of Cell Wall-Bound Exo- and Endo-Î²-Glucanases in Barley Coleoptiles. Plant and Cell Physiology, 2000, 41, 1272-1278.	1.5	45
27	An Â-L-arabinofuranosidase/Â-D-xylosidase from immature seeds of radish (Raphanus sativus L.). Journal of Experimental Botany, 2006, 57, 2353-2362.	2.4	43
28	Characterization of an Exo-Î²-1,3-Galactanase from Clostridium thermocellum. Applied and Environmental Microbiology, 2006, 72, 3515-3523.	1.4	43
29	Bifunctional cytosolic UDP-glucose 4-epimerases catalyse the interconversion between UDP-<scp>D</scp>-xylose and UDP-<scp>L</scp>-arabinose in plants. Biochemical Journal, 2009, 424, 169-177.	1.7	43
30	Chemoenzymatic Synthesis, Inhibition Studies, and X-ray Crystallographic Analysis of the Phosphono Analog of UDP-Galp as an Inhibitor and Mechanistic Probe for UDP-Galactopyranose Mutase. Journal of Molecular Biology, 2010, 403, 578-590.	2.0	40
31	Wolfberry genomes and the evolution of LyciumÂ(Solanaceae). Communications Biology, 2021, 4, 671.	2.0	40
32	Structural and Biochemical Characterization of Glycoside Hydrolase Family 79 Î²-Glucuronidase from Acidobacterium capsulatum. Journal of Biological Chemistry, 2012, 287, 14069-14077.	1.6	39
33	The role of extracellular polysaccharides produced by the terrestrial cyanobacterium Nostoc sp. strain HK-01 in NaCl tolerance. Journal of Applied Phycology, 2012, 24, 237-243.	1.5	39
34	Endo-Î²-1,3-galactanase from Winter Mushroom Flammulina velutipes. Journal of Biological Chemistry, 2011, 286, 27848-27854.	1.6	38
35	A beta-(14)-xylosyltransferase involved in the synthesis of arabinoxylans in developing barley endosperms. Physiologia Plantarum, 2004, 122, 169-180.	2.6	37
36	Expression and Function of Cell Wall-Bound Cationic Peroxidase in Asparagus Somatic Embryogenesis. Plant Physiology, 2003, 131, 1765-1774.	2.3	36

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37	Degradation of carbohydrate moieties of arabinogalactan-proteins by glycoside hydrolases from Neurospora crassa. Carbohydrate Research, 2010, 345, 2516-2522.	1.1	36
38	Molecular Cloning and Expression inPichia pastorisof aIrpex lacteusExo-Î²-(1â†'3)-galactanase Gene. Bioscience, Biotechnology and Biochemistry, 2009, 73, 2303-2309.	0.6	33
39	1-Aminocyclopropane-1-carboxylic acid (ACC)-induced reorientation of cortical microtubules is accompanied by a transient increase in the transcript levels of Î³-tubulin complex and katanin genes in azuki bean epicotyls. Journal of Plant Physiology, 2010, 167, 1165-1171.	1.6	31
40	Mode of Action of Î²-Glucuronidase fromAspergillus nigeron the Sugar Chains of Arabinogalactan-Protein. Bioscience, Biotechnology and Biochemistry, 2005, 69, 2170-2177.	0.6	30
41	Degradative enzymes for type II arabinogalactan side chains in Bifidobacterium longum subsp. longum. Applied Microbiology and Biotechnology, 2019, 103, 1299-1310.	1.7	30
42	Modification of growth anisotropy and cortical microtubule dynamics in Arabidopsis hypocotyls grown under microgravity conditions in space. Physiologia Plantarum, 2018, 162, 135-144.	2.6	29
43	Characterization of an Exo-Î²-1,3-D-galactanase fromStreptomyces avermitilisNBRC14893 Acting on Arabinogalactan-Proteins. Bioscience, Biotechnology and Biochemistry, 2006, 70, 2745-2750.	0.6	27
44	Transient increase in the transcript levels of Î³-tubulin complex genes during reorientation of cortical microtubules by gravity in azuki bean (Vigna angularis) epicotyls. Journal of Plant Research, 2008, 121, 493-498.	1.2	26
45	Enzymatic fragmentation of carbohydrate moieties of radish arabinogalactan-protein and elucidation of the structures. Bioscience, Biotechnology and Biochemistry, 2014, 78, 818-831.	0.6	26
46	Characterization of an Endo-Î²-1,6-Galactanase from Streptomyces avermitilis NBRC14893. Applied and Environmental Microbiology, 2008, 74, 2379-2383.	1.4	25
47	l-Fucose-containing arabinogalactan-protein in radish leaves. Carbohydrate Research, 2015, 415, 1-11.	1.1	25
48	Transient increase in the levels of Î³-tubulin complex and katanin are responsible for reorientation by ethylene and hypergravity of cortical microtubules. Plant Signaling and Behavior, 2010, 5, 1480-1482.	1.2	24
49	Heterologous expression and characterization of an Arabidopsis Î²-l-arabinopyranosidase and Î±-d-galactosidases acting on Î²-l-arabinopyranosyl residues. Journal of Experimental Botany, 2017, 68, 4651-4661.	2.4	21
50	Persistence of plant hormone levels in rice shoots grown under microgravity conditions in space: its relationship to maintenance of shoot growth. Physiologia Plantarum, 2017, 161, 285-293.	2.6	20
51	Generation of nucleotide sugars for biomass formation in plants. Plant Biotechnology, 2010, 27, 231-236.	0.5	19
52	Characterization and function of wall-bound exo-Î²-glucanases of Lilium longiflorum pollen tubes. Sexual Plant Reproduction, 2000, 13, 1-9.	2.2	18
53	Suppression of Hydroxycinnamate Network Formation in Cell Walls of Rice Shoots Grown under Microgravity Conditions in Space. PLoS ONE, 2015, 10, e0137992.	1.1	18
54	Hydroxycinnamic acidâ€modified xylan side chains and their crossâ€linking products in rice cell walls are reduced in the Xylosyl arabinosyl substitution of xylan 1 mutant. Plant Journal, 2022, 109, 1152-1167.	2.8	18

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55	Biosynthesis of (13),(14)-beta-glucan in developing endosperms of barley (Hordeum vulgare). Physiologia Plantarum, 2005, 125, 181-191.	2.6	17
56	The Transcript Level of Katanin Gene is Increased Transiently in Response to Changes in Gravitational Conditions in Azuki Bean Epicotyls. Uchu Seibutsu Kagaku, 2009, 23, 23-28.	1.0	17
57	Properties of two fungal endo-Î²-1,3-galactanases and their synergistic action with an exo-Î²-1,3-galactanase in degrading arabinogalactan-proteins. Carbohydrate Research, 2017, 453-454, 26-35.	1.1	16
58	Gummosis in grape hyacinth (Muscari armeniacum) bulbs: hormonal regulation and chemical composition of gums. Journal of Plant Research, 2010, 123, 363-370.	1.2	15
59	Biosynthesis of the carbohydrate moieties of arabinogalactan proteins by membrane-bound Î²-glucuronosyltransferases from radish primary roots. Planta, 2013, 238, 1157-1169.	1.6	15
60	Yariv reactivity of type II arabinogalactan from larch wood. Carbohydrate Research, 2018, 467, 8-13.	1.1	15
61	Root-knot nematode chemotaxis is positively regulated by <scp>l</scp> -galactose sidechains of mucilage carbohydrate rhamnogalacturonan-I. Science Advances, 2021, 7, .	4.7	15
62	Î²-1,3 : 1,4-Glucan Synthase Activity in Rice Seedlings under Water. Annals of Botany, 2008, 102, 221-226.	1.4	13
63	Action of an endo-Î²-1,3(4)-glucanase on cellobiosyl unit structure in barley Î²-1,3:1,4-glucan. Bioscience, Biotechnology and Biochemistry, 2015, 79, 1810-1817.	0.6	12
64	Properties of arabinogalactan-proteins in European pear (Pyrus communis L.) fruits. Carbohydrate Research, 2019, 485, 107816.	1.1	12
65	Biosynthesis of pectic galactan by membrane-bound galactosyltransferase from soybean (Glycine max) Tj ETQq1 1 0.784314 rgBT /O	1.6	11
66	Enzymatic activity and substrate specificity of the recombinant tomato Î²-galactosidase 1. Journal of Plant Physiology, 2014, 171, 1454-1460.	1.6	11
67	Hormonal regulation of gummosis and composition of gums from bulbs of hyacinth (Hyacinthus) Tj ETQq1 1 0.784314 rgBT /Overlock	1.6	11
68	Microgravity Affects the Level of Matrix Polysaccharide 1,3:1,4-Î²-Glucans in Cell Walls of Rice Shoots by Increasing the Expression Level of a Gene Involved in Their Breakdown. Astrobiology, 2020, 20, 820-829.	1.5	11
69	Chain elongation of pectic Î²-(1â†'4)-galactan by a partially purified galactosyltransferase from soybean (Glycine max Merr.) hypocotyls. Planta, 2007, 226, 571-579.	1.6	10
70	Sugar treatment inhibits IAA-induced expression of endo-1,3:1,4-Î²-glucanase EI transcripts in barley coleoptile segments. Physiologia Plantarum, 2010, 139, no-no.	2.6	10
71	Changes in the transcript levels of microtubule-associated protein MAP65-1 during reorientation of cortical microtubules in azuki bean epicotyls. Acta Physiologiae Plantarum, 2012, 34, 533-540.	1.0	9
72	Expression of a fungal exo-Î²-1,3-galactanase in Arabidopsis reveals a role of type II arabinogalactans in the regulation of cell shape. Journal of Experimental Botany, 2020, 71, 5414-5424.	2.4	9

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73	Biochemical and structural characterization of a novel 4â€Oâ€±â€<scp>l</scp>â€rhamnosylâ€Î²â€<scp>d</scp>â€glucuronidase from Fusarium oxysporum. FEBS Journal, 2021, 288, 4918-4938.	3.2	9
74	Galactoglucomannan structure of Arabidopsis seedâ€coat mucilage in <scp>GDP</scp>â€mannose synthesis impaired mutants. Physiologia Plantarum, 2021, 173, 1244-1252.	2.6	9
75	Small complex-type N-linked glycans are attached to cell-wall bound exo-Î²-glucanases of both mung bean and barley seedlings. Physiologia Plantarum, 2001, 112, 308-314.	2.6	8
76	Superoxide Production by the Red Tide-Producing Chattonella marina Complex (Raphidophyceae) Correlates with Toxicity to Aquacultured Fishes. Antioxidants, 2021, 10, 1635.	2.2	8
77	Roles of MAP65-1 and BPP1 in Gravity Resistance of Arabidopsis hypocotyls. Uchu Seibutsu Kagaku, 2016, 30, 1-7.	1.0	7
78	A Pipeline towards the Biochemical Characterization of the Arabidopsis GT14 Family. International Journal of Molecular Sciences, 2021, 22, 1360.	1.8	7
79	Screening of rice mutants with improved saccharification efficiency results in the identification of CONSTITUTIVE PHOTOMORPHOGENIC 1 and GOLD HULL AND INTERNODE 1. Planta, 2017, 246, 61-74.	1.6	5
80	Structural features conserved in subclass of type II arabinogalactan. Plant Biotechnology, 2020, 37, 459-463.	0.5	5
81	Arabinogalactan-Proteins in The Evolution of Gravity Resistance in Land Plants. Uchu Seibutsu Kagaku, 2009, 23, 143-149.	1.0	4
82	Unique active-site and subsite features in the arabinogalactan-degrading GH43 exo-Î²-1,3-galactanase from Phanerochaete chrysosporium. Journal of Biological Chemistry, 2020, 295, 18539-18552.	1.6	3
83	A protease/peptidase from culture medium of Flammulina velutipes that acts on arabinogalactan-protein. Bioscience, Biotechnology and Biochemistry, 2017, 81, 475-481.	0.6	2
84	Arabinogalactan-proteins Degrading Enzymes. Journal of Applied Glycoscience (1999), 2008, 55, 149-155.	0.3	1
85	Characterization of alkali-soluble polysaccharides in deep subsoil layers. Soil Science and Plant Nutrition, 2013, 59, 871-876.	0.8	1
86	The Mechanics and Biology of Plant Cell Walls: Resilience and Sustainability for Our Future Society. Plant and Cell Physiology, 2021, 62, 1787-1790.	1.5	1