Toshihisa Kotake

List of Publications by Year in Descending Order

85 papers	2,452 citations	30 h-index	47 g-index
88 ext. papers	2,989 ext. citations	4.5 avg, IF	4.47 L-index

#	Paper	IF	Citations
85	The Mechanics and Biology of Plant Cell Walls: Resilience and Sustainability for Our Future Society.. *Plant and Cell Physiology*, **2021**, 62, 1787-1790	4.9	
84	Superoxide Production by the Red Tide-Producing Complex (Raphidophyceae) Correlates with Toxicity to Aquacultured Fishes. *Antioxidants*, **2021**, 10,	7.1	2
83	Biochemical and structural characterization of a novel 4-O-α-rhamnosyl-β-d-glucuronidase from Fusarium oxysporum. *FEBS Journal*, **2021**, 288, 4918-4938	5.7	4
82	Wolfberry genomes and the evolution of Lycium (Solanaceae). *Communications Biology*, **2021**, 4, 671	6.7	3
81	Root-knot nematode chemotaxis is positively regulated by l-galactose sidechains of mucilage carbohydrate rhamnogalacturonan-I. *Science Advances*, **2021**, 7,	14.3	2
80	A Pipeline towards the Biochemical Characterization of the GT14 Family. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
79	Galactoglucomannan structure of Arabidopsis seed-coat mucilage in GDP-mannose synthesis impaired mutants. *Physiologia Plantarum*, **2021**, 173, 1244-1252	4.6	0
78	Unique active-site and subsite features in the arabinogalactan-degrading GH43 exo-β1,3-galactanase from. *Journal of Biological Chemistry*, **2020**, 295, 18539-18552	5.4	1
77	Structural features conserved in subclass of type II arabinogalactan. *Plant Biotechnology*, **2020**, 37, 459-463	1.3	1
76	Calcium Binding by Arabinogalactan Polysaccharides Is Important for Normal Plant Development. *Plant Cell*, **2020**, 32, 3346-3369	11.6	27
75	Expression of a fungal exo-β1,3-galactanase in Arabidopsis reveals a role of type II arabinogalactans in the regulation of cell shape. *Journal of Experimental Botany*, **2020**, 71, 5414-5424	7	3
74	Microgravity Affects the Level of Matrix Polysaccharide 1,3:1,4-β-Glucans in Cell Walls of Rice Shoots by Increasing the Expression Level of a Gene Involved in Their Breakdown. *Astrobiology*, **2020**, 20, 820-829	3.7	5
73	Properties of arabinogalactan-proteins in European pear (Pyrus communis L.) fruits. *Carbohydrate Research*, **2019**, 485, 107816	2.9	5
72	Degradative enzymes for type II arabinogalactan side chains in Bifidobacterium longum subsp. longum. *Applied Microbiology and Biotechnology*, **2019**, 103, 1299-1310	5.7	17
71	Modification of growth anisotropy and cortical microtubule dynamics in Arabidopsis hypocotyls grown under microgravity conditions in space. *Physiologia Plantarum*, **2018**, 162, 135-144	4.6	18
70	Yariv reactivity of type II arabinogalactan from larch wood. *Carbohydrate Research*, **2018**, 467, 8-13	2.9	7
69	The Patterned Structure of Galactoglucomannan Suggests It May Bind to Cellulose in Seed Mucilage. *Plant Physiology*, **2018**, 178, 1011-1026	6.6	30

68	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	4.6	15
67	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	4.7	3
66	Properties of two fungal endo-β1,3-galactanases and their synergistic action with an exo-β1,3-galactanase in degrading arabinogalactan-proteins. *Carbohydrate Research*, **2017**, 453-454, 26-35	2.9	12
65	A Synthetic Glycan Microarray Enables Epitope Mapping of Plant Cell Wall Glycan-Directed Antibodies. *Plant Physiology*, **2017**, 175, 1094-1104	6.6	80
64	Heterologous expression and characterization of an Arabidopsis β-arabinopyranosidase and β-d-galactosidases acting on β-arabinopyranosyl residues. *Journal of Experimental Botany*, **2017**, 68, 4651-4661	7	10
63	A protease/peptidase from culture medium of Flammulina velutipes that acts on arabinogalactan-protein. *Bioscience, Biotechnology and Biochemistry*, **2017**, 81, 475-481	2.1	1
62	Precise estimation of genomic regions controlling lodging resistance using a set of reciprocal chromosome segment substitution lines in rice. *Scientific Reports*, **2016**, 6, 30572	4.9	38
61	Roles of MAP65-1 and BPP1 in Gravity Resistance of Arabidopsis hypocotyls. *Uchu Seibutsu Kagaku*, **2016**, 30, 1-7	1	6
60	Metabolism of L-arabinose in plants. *Journal of Plant Research*, **2016**, 129, 781-792	2.6	29
59	The AMOR Arabinogalactan Sugar Chain Induces Pollen-Tube Competency to Respond to Ovular Guidance. *Current Biology*, **2016**, 26, 1091-7	6.3	78
58	L-Fucose-containing arabinogalactan-protein in radish leaves. *Carbohydrate Research*, **2015**, 415, 1-11	2.9	19
57	Suppression of Hydroxycinnamate Network Formation in Cell Walls of Rice Shoots Grown under Microgravity Conditions in Space. *PLoS ONE*, **2015**, 10, e0137992	3.7	13
56	Action of an endo-β1,3(4)-glucanase on cellobiosyl unit structure in barley β1,3:1,4-glucan. *Bioscience, Biotechnology and Biochemistry*, **2015**, 79, 1810-7	2.1	8
55	KONJAC1 and 2 Are Key Factors for GDP-Mannose Generation and Affect l-Ascorbic Acid and Glucomannan Biosynthesis in Arabidopsis. *Plant Cell*, **2015**, 27, 3397-409	11.6	30
54	Hormonal regulation of gummosis and composition of gums from bulbs of hyacinth (Hyacinthus orientalis). *Journal of Plant Physiology*, **2015**, 174, 1-4	3.6	8
53	Enzymatic activity and substrate specificity of the recombinant tomato β-galactosidase 1. *Journal of Plant Physiology*, **2014**, 171, 1454-60	3.6	8
52	Enzymatic fragmentation of carbohydrate moieties of radish arabinogalactan-protein and elucidation of the structures. *Bioscience, Biotechnology and Biochemistry*, **2014**, 78, 818-31	2.1	19
51	Biosynthesis of the carbohydrate moieties of arabinogalactan proteins by membrane-bound β-glucuronosyltransferases from radish primary roots. *Planta*, **2013**, 238, 1157-69	4.7	4

50	A galactosyltransferase acting on arabinogalactan protein glycans is essential for embryo development in Arabidopsis. *Plant Journal*, **2013**, 76, 128-37	6.9	64
49	Characterization of alkali-soluble polysaccharides in deep subsoil layers. *Soil Science and Plant Nutrition*, **2013**, 59, 871-876	1.6	1
48	A β-glucuronosyltransferase from Arabidopsis thaliana involved in biosynthesis of type II arabinogalactan has a role in cell elongation during seedling growth. *Plant Journal*, **2013**, 76, 1016-29	6.9	60
47	β-galactosyl Yariv reagent binds to the β-1,3-galactan of arabinogalactan proteins. *Plant Physiology*, **2013**, 161, 1117-26	6.6	101
46	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	2.6	6
45	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	3.2	35
44	Structural characterization of Arabidopsis leaf arabinogalactan polysaccharides. *Plant Physiology*, **2012**, 160, 653-66	6.6	93
43	Structural and biochemical characterization of glycoside hydrolase family 79 β-glucuronidase from Acidobacterium capsulatum. *Journal of Biological Chemistry*, **2012**, 287, 14069-77	5.4	29
42	Endo-beta-1,3-galactanase from winter mushroom Flammulina velutipes. *Journal of Biological Chemistry*, **2011**, 286, 27848-54	5.4	29
41	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, 2053-62	7	56
40	Sugar treatment inhibits IAA-induced expression of endo-1,3:1,4-beta-glucanase EI transcripts in barley coleoptile segments. *Physiologia Plantarum*, **2010**, 139, 413-20	4.6	9
39	Generation of nucleotide sugars for biomass formation in plants. *Plant Biotechnology*, **2010**, 27, 231-236	1.3	16
38	Transient increase in the levels of γ-tubulin complex and katanin are responsible for reorientation by ethylene and hypergravity of cortical microtubules. *Plant Signaling and Behavior*, **2010**, 5, 1480-2	2.5	9
37	1-aminocyclopropane-1-carboxylic acid (ACC)-induced reorientation of cortical microtubules is accompanied by a transient increase in the transcript levels of gamma-tubulin complex and katanin genes in azuki bean epicotyls. *Journal of Plant Physiology*, **2010**, 167, 1165-71	3.6	15
36	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, 578-90	6.5	37
35	Rice BRITTLE CULM 3 (BC3) encodes a classical dynamin OsDRP2B essential for proper secondary cell wall synthesis. *Planta*, **2010**, 232, 95-108	4.7	52
34	Gummosis in grape hyacinth (Muscari armeniacum) bulbs: hormonal regulation and chemical composition of gums. *Journal of Plant Research*, **2010**, 123, 363-70	2.6	12
33	Degradation of carbohydrate moieties of arabinogalactan-proteins by glycoside hydrolases from Neurospora crassa. *Carbohydrate Research*, **2010**, 345, 2516-22	2.9	30

32	Carbohydrate structural analysis of wheat flour arabinogalactan protein. *Carbohydrate Research*, **2010**, 345, 2648-56	2.9	84
31	Molecular cloning and expression in Pichia pastoris of a Irpex lacteus exo-beta-(1-->3)-galactanase gene. *Bioscience, Biotechnology and Biochemistry*, **2009**, 73, 2303-9	2.1	27
30	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, 1886-97	4.9	48
29	The GLABRA2 homeodomain protein directly regulates CESA5 and XTH17 gene expression in Arabidopsis roots. *Plant Journal*, **2009**, 60, 564-74	6.9	49
28	Bifunctional cytosolic UDP-glucose 4-epimerases catalyse the interconversion between UDP-D-xylose and UDP-L-arabinose in plants. *Biochemical Journal*, **2009**, 424, 169-77	3.8	36
27	Arabinogalactan-Proteins in The Evolution of Gravity Resistance in Land Plants. *Uchu Seibutsu Kagaku*, **2009**, 23, 143-149	1	3
26	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	15
25	Characterization of an endo-beta-1,6-Galactanase from Streptomyces avermitilis NBRC14893. *Applied and Environmental Microbiology*, **2008**, 74, 2379-83	4.8	20
24	Beta-1,3:1,4-glucan synthase activity in rice seedlings under water. *Annals of Botany*, **2008**, 102, 221-6	4.1	12
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, 8125-35	5.4	44
22	Arabinogalactan-proteins Degrading Enzymes. *Journal of Applied Glycoscience (1999)*, **2008**, 55, 149-155	1	1
21	Transient increase in the transcript levels of gamma-tubulin complex genes during reorientation of cortical microtubules by gravity in azuki bean (Vigna angularis) epicotyls. *Journal of Plant Research*, **2008**, 121, 493-8	2.6	24
20	Properties of family 79 beta-glucuronidases that hydrolyze beta-glucuronosyl and 4-O-methyl-beta-glucuronosyl residues of arabinogalactan-protein. *Carbohydrate Research*, **2008**, 343, 1191-201	2.9	44
19	Properties and physiological functions of UDP-sugar pyrophosphorylase in Arabidopsis. *Bioscience, Biotechnology and Biochemistry*, **2007**, 71, 761-71	2.1	72
18	Chain elongation of pectic beta-(1-->4)-galactan by a partially purified galactosyltransferase from soybean (Glycine max Merr.) hypocotyls. *Planta*, **2007**, 226, 571-9	4.7	10
17	An alpha-L-arabinofuranosidase/beta-D-xylosidase from immature seeds of radish (Raphanus sativus L.). *Journal of Experimental Botany*, **2006**, 57, 2353-62	7	37
16	Characterization of an exo-beta-1,3-galactanase from Clostridium thermocellum. *Applied and Environmental Microbiology*, **2006**, 72, 3515-23	4.8	35
15	Characterization of an exo-beta-1,3-D-galactanase from Streptomyces avermitilis NBRC14893 acting on arabinogalactan-proteins. *Bioscience, Biotechnology and Biochemistry*, **2006**, 70, 2745-50	2.1	25

14	Mode of action of beta-glucuronidase from Aspergillus niger on the sugar chains of arabinogalactan-protein. *Bioscience, Biotechnology and Biochemistry*, **2005**, 69, 2170-7	2.1	22
13	Biosynthesis of (1->3),(1->4)-β-glucan in developing endosperms of barley (Hordeum vulgare). *Physiologia Plantarum*, **2005**, 125, 181-191	4.6	14
12	An exo-beta-1,3-galactanase having a novel beta-1,3-galactan-binding module from Phanerochaete chrysosporium. *Journal of Biological Chemistry*, **2005**, 280, 25820-9	5.4	66
11	Molecular cloning of a {beta}-galactosidase from radish that specifically hydrolyzes {beta}-(1->3)- and {beta}-(1->6)-galactosyl residues of Arabinogalactan protein. *Plant Physiology*, **2005**, 138, 1563-76	6.6	82
10	UDP-sugar pyrophosphorylase with broad substrate specificity toward various monosaccharide 1-phosphates from pea sprouts. *Journal of Biological Chemistry*, **2004**, 279, 45728-36	5.4	92
9	A β(1->4)-xylosyltransferase involved in the synthesis of arabinoxylans in developing barley endosperms. *Physiologia Plantarum*, **2004**, 122, 169-180	4.6	35
8	Biosynthesis of pectic galactan by membrane-bound galactosyltransferase from soybean (Glycine max Merr) seedlings. *Planta*, **2004**, 218, 833-42	4.7	10
7	Molecular cloning and expression in Escherichia coli of a Trichoderma viride endo-beta-(1-->6)-galactanase gene. *Biochemical Journal*, **2004**, 377, 749-55	3.8	49
6	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, 555-64	4.9	196
5	Expression and function of cell wall-bound cationic peroxidase in asparagus somatic embryogenesis. *Plant Physiology*, **2003**, 131, 1765-74	6.6	31
4	Small complex-type N-linked glycans are attached to cell-wall bound exo-beta-glucanases of both mung bean and barley seedlings. *Physiologia Plantarum*, **2001**, 112, 308-314	4.6	8
3	Characterization and function of wall-bound exo-β-glucanases of Lilium longiflorum pollen tubes. *Sexual Plant Reproduction*, **2000**, 13, 1-9		15
2	Auxin-induced elongation growth and expressions of cell wall-bound exo- and endo-beta-glucanases in barley coleoptiles. *Plant and Cell Physiology*, **2000**, 41, 1272-8	4.9	41
1	Purification and characterization of wall-bound exo-1,3-beta-D-glucanase from barley (Hordeum vulgare L.) seedlings. *Plant and Cell Physiology*, **1997**, 38, 194-200	4.9	42