

Kazuhiko Nishitani

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

80
papers

4,629
citations

37
h-index

67
g-index

93
ext. papers

5,549
ext. citations

5.7
avg, IF

5.28
L-index

#	Paper	IF	Citations
80	The XTH family of enzymes involved in xyloglucan endotransglucosylation and endohydrolysis: current perspectives and a new unifying nomenclature. <i>Plant and Cell Physiology</i> , 2002 , 43, 1421-35	4.9	568
79	Insights into Land Plant Evolution Garnered from the <i>Marchantia polymorpha</i> Genome. <i>Cell</i> , 2017 , 171, 287-304.e15	56.2	538
78	A comprehensive expression analysis of all members of a gene family encoding cell-wall enzymes allowed us to predict cis-regulatory regions involved in cell-wall construction in specific organs of <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2001 , 42, 1025-33	4.9	218
77	The ANGUSTIFOLIA gene of <i>Arabidopsis</i> , a plant CtBP gene, regulates leaf-cell expansion, the arrangement of cortical microtubules in leaf cells and expression of a gene involved in cell-wall formation. <i>EMBO Journal</i> , 2002 , 21, 1267-79	13	175
76	Auxin-induced changes in the cell wall structure: Changes in the sugar compositions, intrinsic viscosity and molecular weight distributions of matrix polysaccharides of the epicotyl cell wall of <i>Vigna angularis</i> . <i>Physiologia Plantarum</i> , 1981 , 52, 482-494	4.6	161
75	A surprising diversity and abundance of xyloglucan endotransglucosylase/hydrolases in rice. Classification and expression analysis. <i>Plant Physiology</i> , 2004 , 134, 1088-99	6.6	159
74	The role of endoxyloglucan transferase in the organization of plant cell walls. <i>International Review of Cytology</i> , 1997 , 173, 157-206		140
73	KaPPA-view: a web-based analysis tool for integration of transcript and metabolite data on plant metabolic pathway maps. <i>Plant Physiology</i> , 2005 , 138, 1289-300	6.6	140
72	Genomic basis for cell-wall diversity in plants. A comparative approach to gene families in rice and <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2004 , 45, 1111-21	4.9	132
71	Demethylesterification of the primary wall by PECTIN METHYLESTERASE35 provides mechanical support to the <i>Arabidopsis</i> stem. <i>Plant Cell</i> , 2012 , 24, 2624-34	11.6	123
70	Light quality-mediated petiole elongation in <i>Arabidopsis</i> during shade avoidance involves cell wall modification by xyloglucan endotransglucosylase/hydrolases. <i>Plant Physiology</i> , 2010 , 154, 978-90	6.6	119
69	A proteomic approach to apoplastic proteins involved in cell wall regeneration in protoplasts of <i>Arabidopsis</i> suspension-cultured cells. <i>Plant and Cell Physiology</i> , 2005 , 46, 843-57	4.9	113
68	Differential expression of AtXTH17, AtXTH18, AtXTH19 and AtXTH20 genes in <i>Arabidopsis</i> roots. Physiological roles in specification in cell wall construction. <i>Plant and Cell Physiology</i> , 2005 , 46, 192-200	4.9	94
67	An isoflavone conjugate-hydrolyzing beta-glucosidase from the roots of soybean (<i>Glycine max</i>) seedlings: purification, gene cloning, phylogenetics, and cellular localization. <i>Journal of Biological Chemistry</i> , 2006 , 281, 30251-9	5.4	90
66	Ethylene-gibberellin signaling underlies adaptation of rice to periodic flooding. <i>Science</i> , 2018 , 361, 181-186	35.3	89
65	A Dof transcription factor, SCAP1, is essential for the development of functional stomata in <i>Arabidopsis</i> . <i>Current Biology</i> , 2013 , 23, 479-84	6.3	81
64	A principal role for AtXTH18 in <i>Arabidopsis thaliana</i> root growth: a functional analysis using RNAi plants. <i>Journal of Plant Research</i> , 2006 , 119, 153-62	2.6	80

63	Growth and cell wall changes in azuki bean epicotyls II. Changes in wall polysaccharides during auxin-induced growth of excised segments. <i>Plant and Cell Physiology</i> , 1979 , 20, 463-472	4.9	73
62	Active gene expression of a xyloglucan endotransglucosylase/hydrolase gene, XTH9, in inflorescence apices is related to cell elongation in <i>Arabidopsis thaliana</i> . <i>Plant Molecular Biology</i> , 2003 , 52, 473-82	4.6	66
61	Spatiotemporal secretion of PEROXIDASE36 is required for seed coat mucilage extrusion in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2013 , 25, 1355-67	11.6	65
60	AtXTH27 plays an essential role in cell wall modification during the development of tracheary elements. <i>Plant Journal</i> , 2005 , 42, 525-34	6.9	64
59	In vitro molecular weight increase in xyloglucans by an apoplastic enzyme preparation from epicotyls of <i>Vigna angularis</i> . <i>Physiologia Plantarum</i> , 1991 , 82, 490-497	4.6	62
58	Cloning, characterization, and expression of xyloglucan endotransglucosylase/hydrolase and expansin genes associated with petal growth and development during carnation flower opening. <i>Journal of Experimental Botany</i> , 2011 , 62, 815-23	7	59
57	Auxin-induced changes in the molecular weight of hemicellulosic polysaccharides of the <i>Avena</i> coleoptile cell wall. <i>Plant and Cell Physiology</i> , 1979 , 20, 1349-1357	4.9	58
56	Expression of endoxyloglucan transferase genes in acaulis mutants of <i>Arabidopsis</i> . <i>Plant Physiology</i> , 1999 , 121, 715-22	6.6	57
55	Endoxyloglucan transferase is localized both in the cell plate and in the secretory pathway destined for the apoplast in tobacco cells. <i>Plant and Cell Physiology</i> , 2001 , 42, 292-300	4.9	55
54	Endo-xyloglucan transferase, a new class of transferase involved in cell wall construction. <i>Journal of Plant Research</i> , 1995 , 108, 137-148	2.6	55
53	Effect of silicon deficiency on secondary cell wall synthesis in rice leaf. <i>Journal of Plant Research</i> , 2012 , 125, 771-9	2.6	52
52	Pectin RG-I rhamnosyltransferases represent a novel plant-specific glycosyltransferase family. <i>Nature Plants</i> , 2018 , 4, 669-676	11.5	50
51	The GLABRA2 homeodomain protein directly regulates CESA5 and XTH17 gene expression in <i>Arabidopsis</i> roots. <i>Plant Journal</i> , 2009 , 60, 564-74	6.9	49
50	Acid pH-Induced Structural Changes in Cell Wall Xyloglucans in <i>Vigna Angularis</i> Epicotyl Segments. <i>Plant Science Letters</i> , 1982 , 28, 87-94		49
49	Construction and restructuring of the cellulose-xyloglucan framework in the apoplast as mediated by the xyloglucan-related protein family: A hypothetical scheme. <i>Journal of Plant Research</i> , 1998 , 111, 159-166	2.6	47
48	The plant cell-wall enzyme AtXTH3 catalyses covalent cross-linking between cellulose and cello-oligosaccharide. <i>Scientific Reports</i> , 2017 , 7, 46099	4.9	44
47	The matrix polysaccharide (1;3,1;4)- β -D-glucan is involved in silicon-dependent strengthening of rice cell wall. <i>Plant and Cell Physiology</i> , 2015 , 56, 268-76	4.9	40
46	Identification and characterization of <i>Arabidopsis thaliana</i> genes involved in xylem secondary cell walls. <i>Journal of Plant Research</i> , 2006 , 119, 189-94	2.6	40

45	Function of xyloglucan endotransglucosylase/hydrolases in rice. <i>Annals of Botany</i> , 2014 , 114, 1309-18	4.1	38
44	XTH20 and XTH19 regulated by ANAC071 under auxin flow are involved in cell proliferation in incised Arabidopsis inflorescence stems. <i>Plant Journal</i> , 2014 , 80, 604-14	6.9	37
43	Comprehensive approach to genes involved in cell wall modifications in Arabidopsis thaliana. <i>Plant Molecular Biology</i> , 2005 , 58, 177-92	4.6	37
42	Biological implications of the occurrence of 32 members of the XTH (xyloglucan endotransglucosylase/hydrolase) family of proteins in the bryophyte Physcomitrella patens. <i>Plant Journal</i> , 2010 , 64, 645-56	6.9	35
41	Enzymic Analysis of Feruloylated Arabinoxylans (Feraxan) Derived from Zea mays Cell Walls I : Purification of Novel Enzymes Capable of Dissociating Feraxan Fragments from Zea mays Coleoptile Cell Wall. <i>Plant Physiology</i> , 1988 , 87, 883-90	6.6	33
40	Chromatin-mediated feed-forward auxin biosynthesis in floral meristem determinacy. <i>Nature Communications</i> , 2018 , 9, 5290	17.4	33
39	Two azuki bean XTH genes, VaXTH1 and VaXTH2, with similar tissue-specific expression profiles, are differently regulated by auxin. <i>Plant and Cell Physiology</i> , 2003 , 44, 16-24	4.9	32
38	Enzymic Analysis of Feruloylated Arabinoxylans (Feraxan) Derived from Zea mays Cell Walls : II. Fractionation and Partial Characterization of Feraxan Fragments Dissociated by a Bacillus subtilis Enzyme (Feraxanase). <i>Plant Physiology</i> , 1989 , 91, 242-8	6.6	29
37	Genotypic variations in non-structural carbohydrate and cell-wall components of the stem in rice, sorghum, and sugar vane. <i>Bioscience, Biotechnology and Biochemistry</i> , 2011 , 75, 1104-12	2.1	26
36	Roles of the XTH Protein Family in the Expanding Cell		25
35	Roles of auxin and gibberellic acid in growth and maturation of epicotyls of Vigna angularis: Cell wall changes. <i>Physiologia Plantarum</i> , 1982 , 56, 38-45	4.6	21
34	A genome-based approach to study the mechanisms by which cell-wall type is defined and constructed by the collaborative actions of cell-wall-related enzymes. <i>Journal of Plant Research</i> , 2002 , 115, 303-7	2.6	20
33	The AtXTH28 gene, a xyloglucan endotransglucosylase/hydrolase, is involved in automatic self-pollination in Arabidopsis thaliana. <i>Plant and Cell Physiology</i> , 2009 , 50, 413-22	4.9	18
32	Carbohydrate-binding module of a rice endo-beta-1,4-glycanase, OsCel9A, expressed in auxin-induced lateral root primordia, is post-translationally truncated. <i>Plant and Cell Physiology</i> , 2006 , 47, 1555-71	4.9	18
31	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs. <i>PLoS Biology</i> , 2019 , 17, e3000560	9.7	17
30	Enzymic Analysis of Feruloylated Arabinoxylans (Feraxan) Derived from Zea mays Cell Walls : III. Structural Changes in the Feraxan during Coleoptile Elongation. <i>Plant Physiology</i> , 1990 , 93, 396-402	6.6	16
29	Quantitative confocal imaging method for analyzing cellulose dynamics during cell wall regeneration in Arabidopsis mesophyll protoplasts. <i>Plant Direct</i> , 2017 , 1, e00021	3.3	13
28	Mechanical load induces upregulation of transcripts for a set of genes implicated in secondary wall formation in the supporting tissue of Arabidopsis thaliana. <i>Journal of Plant Research</i> , 2009 , 122, 651-9	2.6	13

27	JAXA Space Plant Research on the ISS with European Modular Cultivation System. <i>Uchu Seibutsu Kagaku</i> , 2007 , 21, 62-66	1	11
26	Diversity of Pectin Rhamnogalacturonan I Rhamnosyltransferases in Glycosyltransferase Family 106. <i>Frontiers in Plant Science</i> , 2020 , 11, 997	6.2	11
25	Cell wall modification by the xyloglucan endotransglucosylase/hydrolase XTH19 influences freezing tolerance after cold and sub-zero acclimation. <i>Plant, Cell and Environment</i> , 2021 , 44, 915-930	8.4	11
24	Stimulation of Cell Elongation by Tetraploidy in Hypocotyls of Dark-Grown Arabidopsis Seedlings. <i>PLoS ONE</i> , 2015 , 10, e0134547	3.7	10
23	Arabinogalactan Proteins Accumulate in the Cell Walls of Searching Hyphae of the Stem Parasitic Plants, <i>Cuscuta campestris</i> and <i>Cuscuta japonica</i> . <i>Plant and Cell Physiology</i> , 2017 , 58, 1868-1877	4.9	9
22	Plant responses to simulated microgravity. <i>Advances in Space Biology and Medicine</i> , 1994 , 4, 111-26		9
21	Arabidopsis Regenerating Protoplast: A Powerful Model System for Combining the Proteomics of Cell Wall Proteins and the Visualization of Cell Wall Dynamics. <i>Proteomes</i> , 2016 , 4,	4.6	9
20	Xyloglucan Is Not Essential for the Formation and Integrity of the Cellulose Network in the Primary Cell Wall Regenerated from Protoplasts. <i>Plants</i> , 2020 , 9,	4.5	8
19	Growth regulation mechanisms in higher plants under microgravity conditions - changes in cell wall metabolism. <i>Uchu Seibutsu Kagaku</i> , 2000 , 14, 75-96	1	8
18	In vitro molecular weight increase in xyloglucans by an apoplastic enzyme preparation from epicotyls of <i>Vigna angularis</i> . <i>Physiologia Plantarum</i> , 1991 , 82, 490-497	4.6	8
17	Interspecific Signaling Between the Parasitic Plant and the Host Plants Regulate Xylem Vessel Cell Differentiation in <i>Haustoria</i> of. <i>Frontiers in Plant Science</i> , 2020 , 11, 193	6.2	7
16	Preparation and Outline of Space-Based Studies on Gravity Responses and Cell Wall Formation in Plants. <i>Uchu Seibutsu Kagaku</i> , 2009 , 23, 115-120	1	6
15	An enzyme probe for the resolution of glucuronoxylan and glucuronoarabinoxylan structures. <i>Food Hydrocolloids</i> , 1991 , 5, 197-207	10.6	5
14	Reverse Genetic Approach to Exploring Genes Responsible for Cell-Wall Dynamics in Supporting Tissues of <i>Arabidopsis thaliana</i> under Microgravity Conditions. <i>Uchu Seibutsu Kagaku</i> , 2007 , 21, 48-55	1	5
13	Root-knot nematodes modulate cell walls during root-knot formation in <i>Arabidopsis</i> roots. <i>Journal of Plant Research</i> , 2020 , 133, 419-428	2.6	4
12	Varietal Differences in Cell Wall $\beta(1\rightarrow3), (1\rightarrow4)$ -Glucan and Nonstructural Carbohydrate in Rice Stems during the Grain Filling Stage. <i>Plant Production Science</i> , 2013 , 16, 335-341	2.4	4
11	Cell Wall Dynamics in Tobacco BY-2 Cells. <i>Biotechnology in Agriculture and Forestry</i> , 2004 , 217-230		4
10	Cryogenian Origin and Subsequent Diversification of the Plant Cell-Wall Enzyme XTH Family. <i>Plant and Cell Physiology</i> , 2021 ,	4.9	4

9	Possible pathways linking ploidy level to cell elongation and cuticular function in hypocotyls of dark-grown Arabidopsis seedlings. <i>Plant Signaling and Behavior</i> , 2016 , 11, e1118597	2.5	3
8	Structural Alteration of Rice Pectin Affects Cell Wall Mechanical Strength and Pathogenicity of the Rice Blast Fungus Under Weak Light Conditions. <i>Plant and Cell Physiology</i> , 2021 , 62, 641-649	4.9	3
7	Effects of 5-FdUrd on the Cell Wall Composition of Sinapis alba Hypocotyls. <i>Zeitschrift für Pflanzenphysiologie</i> , 1981 , 103, 87-93		2
6	Implication of Xyloglucan Related Protein(XRP) Family in Regulation of Plant Growth and Development.. <i>Trends in Glycoscience and Glycotechnology</i> , 1997 , 9, 233-234	0.1	2
5	Host-produced ethylene is required for marked cell expansion and endoreduplication in dodder search hyphae. <i>Plant Physiology</i> , 2021 , 185, 491-502	6.6	2
4	Protein ligand-tethered synthetic calcium indicator for localization control and spatiotemporal calcium imaging in plant cells. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2016 , 26, 9-14	2.9	1
3	The Biosynthesis and Function of Polysaccharide Components of the Plant Cell Wall 2014 , 1-34		1
2	Laser micromarking technique in studying the negative gravitropism in pea stem. <i>Plant Biotechnology</i> , 2020 , 37, 485-488	1.3	1
1	Cell Wall-Related Genes Involved in Supporting Tissue Formation and Transcriptional Regulation in Arabidopsis thaliana. <i>Uchu Seibutsu Kagaku</i> , 2009 , 23, 121-129		1