Malcolm A O'neill

List of Publications by Year
in descending order

74 papers	9,859 citations	66343 42 h-index	79698 73 g-index
76 all docs	76 docs citations	76 times ranked	8100 citing authors

#	Article	IF	Citations
1	Pectins: structure, biosynthesis, and oligogalacturonide-related signaling. Phytochemistry, 2001, 57, 929-967.	2.9	1,596
2	RHAMNOGALACTURONAN II: Structure and Function of a Borate Cross-Linked Cell Wall Pectic Polysaccharide. Annual Review of Plant Biology, 2004, 55, 109-139.	18.7	774
3	Requirement of Borate Cross-Linking of Cell Wall Rhamnogalacturonan II for Arabidopsis Growth. Science, 2001, 294, 846-849.	12.6	599
4	Rhamnogalacturonan-II, a Pectic Polysaccharide in the Walls of Growing Plant Cell, Forms a Dimer That Is Covalently Cross-linked by a Borate Ester. Journal of Biological Chemistry, 1996, 271, 22923-22930.	3.4	472
5	The Pore Size of Non-Graminaceous Plant Cell Walls Is Rapidly Decreased by Borate Ester Cross-Linking of the Pectic Polysaccharide Rhamnogalacturonan II. Plant Physiology, 1999, 121, 829-838.	4.8	456
6	Complex pectin metabolism by gut bacteria reveals novel catalytic functions. Nature, 2017, 544, 65-70.	27.8	447
7	Arabidopsis irregular xylem8 and irregular xylem9: Implications for the Complexity of Glucuronoxylan Biosynthesis. Plant Cell, 2007, 19, 549-563.	6.6	396
8	A Reevaluation of the Key Factors That Influence Tomato Fruit Softening and Integrity. Plant Physiology, 2007, 144, 1012-1028.	4.8	328
9	Oligosaccharinsâ€"oligosaccharides that regulate growth, development and defence responses in plants. Glycobiology, 1992, 2, 181-198.	2.5	301
10	Structure of the acidic extracellular gelling polysaccharide produced by Pseudomonas elodea. Carbohydrate Research, 1983, 124, 123-133.	2.3	276
11	The charophycean green algae provide insights into the early origins of plant cell walls. Plant Journal, 2011, 68, 201-211.	5.7	226
12	Plant Nucleotide Sugar Formation, Interconversion, and Salvage by Sugar Recycling*. Annual Review of Plant Biology, 2011, 62, 127-155.	18.7	219
13	Structural characterization of red wine rhamnogalacturonan II. Carbohydrate Research, 1996, 290, 183-197.	2.3	203
14	Occurrence of the Primary Cell Wall Polysaccharide Rhamnogalacturonan II in Pteridophytes, Lycophytes, and Bryophytes. Implications for the Evolution of Vascular Plants. Plant Physiology, 2004, 134, 339-351.	4.8	203
15	Biochemical control of xylan biosynthesis â€" which end is up?. Current Opinion in Plant Biology, 2008, 11, 258-265.	7.1	179
16	The Plant Cell Wall Polysaccharide Rhamnogalacturonan II Self-assembles into a Covalently Cross-linked Dimer. Journal of Biological Chemistry, 1999, 274, 13098-13104.	3.4	175
17	4- <i>O</i> -methylation of glucuronic acid in <i>Arabidopsis</i> glucuronoxylan is catalyzed by a domain of unknown function family 579 protein. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14253-14258.	7.1	164
18	The irregular xylem9 Mutant is Deficient in Xylan Xylosyltransferase Activity. Plant and Cell Physiology, 2007, 48, 1624-1634.	3.1	147

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19	Moss and liverwort xyloglucans contain galacturonic acid and are structurally distinct from the xyloglucans synthesized by hornworts and vascular plants*. Glycobiology, 2008, 18, 891-904.	2.5	134
20	A plant mutase that interconverts UDP-arabinofuranose and UDP-arabinopyranose. Glycobiology, 2007, 17, 345-354.	2.5	133
21	Transport of Boron by the<i>tassel-less1</i>Aquaporin Is Critical for Vegetative and Reproductive Development in Maize Â Â. Plant Cell, 2014, 26, 2978-2995.	6.6	113
22	Generation and structural validation of a library of diverse xyloglucan-derived oligosaccharides, including an update on xyloglucan nomenclature. Carbohydrate Research, 2015, 402, 56-66.	2.3	110
23	A Galacturonic Acidâ€"Containing Xyloglucan Is Involved in <i>Arabidopsis</i> Root Hair Tip Growth. Plant Cell, 2012, 24, 4511-4524.	6.6	106
24	Structural characterization of the pectic polysaccharide rhamnogalacturonan II: evidence for the backbone location of the aceric acid-containing oligoglycosyl side chain. Carbohydrate Research, 2000, 326, 277-294.	2.3	105
25	Structural characterization of the pectic polysaccharide, rhamnogalacturonan-II. Carbohydrate Research, 1995, 271, 15-29.	2.3	100
26	Structural characterization of endo-glycanase-generated oligoglycosyl side chains of rhamnogalacturonan I. Carbohydrate Research, 1993, 243, 359-371.	2.3	93
27	Galactose-Depleted Xyloglucan Is Dysfunctional and Leads to Dwarfism in Arabidopsis. Plant Physiology, 2015, 167, 1296-1306.	4.8	90
28	Structural diversity of xylans in the cell walls of monocots. Planta, 2016, 244, 589-606.	3.2	83
29	Analysis of Xyloglucan Fucosylation in Arabidopsis. Plant Physiology, 2003, 132, 768-778.	4.8	82
30	Oligosaccharins: oligosaccharide regulatory molecules. Accounts of Chemical Research, 1992, 25, 77-83.	15.6	79
31	l-Galactose replaces l-fucose in the pectic polysaccharide rhamnogalacturonanÂII synthesized by the l-fucose-deficient mur1 Arabidopsis mutant. Planta, 2004, 219, 147-157.	3.2	78
32	Purification and characterization of biologically active 1,4-linked Î±-d-oligogalacturonides after partial digestion of polygalacturonic acid with endopolygalacturonase. Carbohydrate Research, 1993, 247, 9-20.	2.3	75
33	Primary structure of the 2-O-methyl-Î±-l-fucose-containing side chain of the pectic polysaccharide, rhamnogalacturonan II. Carbohydrate Research, 2003, 338, 341-352.	2.3	66
34	Polysaccharides from grape berry cell walls. Part II. Structural characterization of the xyloglucan polysaccharides. Carbohydrate Polymers, 2003, 53, 253-261.	10.2	64
35	The ability of land plants to synthesize glucuronoxylans predates the evolution of tracheophytes. Glycobiology, 2012, 22, 439-451.	2.5	63
36	Isolation and partial characterisation of a xyloglucan from the cell walls of Phaseolus coccineus. Carbohydrate Research, 1983, 111, 239-255.	2.3	58

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37	The backbone of the pectic polysaccharide rhamnogalacturonan I is cleaved by an endohydrolase and an endolyase. Glycobiology, 1995, 5, 783-789.	2.5	56
38	Cell wall metabolism in cold-stored tomato fruit. Postharvest Biology and Technology, 2010, 57, 106-113.	6.0	52
39	Structure of the extracellular polysaccharide produced by the bacterium Alcaligenes (ATCC 31555) species. Carbohydrate Research, 1986, 147, 295-313.	2.3	50
40	Static and dynamic light-scattering studies of pectic polysaccharides from the middle lamellae and primary cell walls of cider apples. Carbohydrate Research, 1987, 165, 53-68.	2.3	49
41	The Synthesis and Origin of the Pectic Polysaccharide Rhamnogalacturonan II â€“ Insights from Nucleotide Sugar Formation and Diversity. Frontiers in Plant Science, 2012, 3, 92.	3.6	47
42	Isolation and structural characterization of endo-rhamnogalacturonase-generated fragments of the backbone of rhamnogalacturonan I. Carbohydrate Research, 1994, 264, 83-96.	2.3	43
43	Biological Activity of Reducing-End-Derivatized Oligogalacturonides in Tobacco Tissue Cultures1. Plant Physiology, 1998, 116, 1289-1298.	4.8	43
44	Methods for Structural Characterization of the Products of Cellulose- and Xyloglucan-Hydrolyzing Enzymes. Methods in Enzymology, 2012, 510, 121-139.	1.0	43
45	Structure of the extracellular gelling polysaccharide produced by Enterobacter (NCIB 11870) species. Carbohydrate Research, 1986, 148, 63-69.	2.3	41
46	Methylation analysis of cell-wall material from parenchymatous tissues of phaseolus vulgaris and phaseolus coccineus. Carbohydrate Research, 1980, 79, 115-124.	2.3	40
47	Changes in the abundance of cell wall apiogalacturonan and xylogalacturonan and conservation of rhamnogalacturonan II structure during the diversification of the Lemnoideae. Planta, 2018, 247, 953-971.	3.2	36
48	Selective chemical depolymerization of rhamnogalacturonans. Carbohydrate Research, 2006, 341, 474-484.	2.3	34
49	Comparison of Arabinoxylan Structure in Bioenergy and Model Grasses. Industrial Biotechnology, 2012, 8, 222-229.	0.8	34
50	Methylation analysis of cell wall glycoproteins and glycopeptides from Chlamydomonas reinhardii. Phytochemistry, 1981, 20, 25-28.	2.9	33
51	Suppression of Arabidopsis <scp>GGLT</scp>1 affects growth by reducing the Lâ€galactose content and borate crossâ€linking of rhamnogalacturonanâ€<scp>II</scp>. Plant Journal, 2018, 96, 1036-1050.	5.7	33
52	ERF4 and MYB52 transcription factors play antagonistic roles in regulating homogalacturonan de-methylesterification in Arabidopsis seed coat mucilage. Plant Cell, 2021, 33, 381-403.	6.6	32
53	Structural analysis of the xyloglucan from Phaseolus coccineus cell-walls using cellulase-derived oligosaccharides. Carbohydrate Research, 1985, 145, 45-58.	2.3	29
54	Structural analysis of an acidic polysaccharide secreted by Xanthobacter sp. (ATCC 53272). Carbohydrate Research, 1990, 206, 289-296.	2.3	26

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55	The transient nature of the oligogalaturonide-induced ion fluxes of tobacco cells is not correlated with fragmentation of the oligogalacturonides. Plant Journal, 1998, 16, 305-311.	5.7	25
56	Genome-Wide Analysis of Sorghum GT47 Family Reveals Functional Divergences of MUR3-Like Genes. Frontiers in Plant Science, 2018, 9, 1773.	3.6	25
57	Cross species multiâ€omics reveals cell wall sequestration and elevated global transcript abundance as mechanisms of boron tolerance in plants. New Phytologist, 2021, 230, 1985-2000.	7.3	25
58	DGE-seq analysis of MUR3-related Arabidopsis mutants provides insight into how dysfunctional xyloglucan affects cell elongation. Plant Science, 2017, 258, 156-169.	3.6	22
59	Synthesis and Immunological Properties of a Tetrasaccharide Portion of the B Side Chain of Rhamnogalacturonan II (RGâ€II). ChemBioChem, 2008, 9, 381-388.	2.6	21
60	Boron-bridged RG-II and calcium are required to maintain the pectin network of the Arabidopsis seed mucilage ultrastructure. Plant Molecular Biology, 2017, 94, 267-280.	3.9	21
61	Insights into cell wall structure of Sida hermaphrodita and its influence on recalcitrance. Carbohydrate Polymers, 2017, 168, 94-102.	10.2	21
62	Locating Methyl-Etherified and Methyl-Esterified Uronic Acids in the Plant Cell Wall Pectic Polysaccharide Rhamnogalacturonan II. SLAS Technology, 2020, 25, 329-344.	1.9	19
63	Structural features of the mucilage from the stem pith of kiwifruit (actinidia deliciosa): part I, structure of the inner core. Carbohydrate Research, 1986, 153, 97-106.	2.3	18
64	Xyloglucan, galactomannan, glucuronoxylan, and rhamnogalacturonan I do not have identical structures in soybean root and root hair cell walls. Planta, 2015, 242, 1123-1138.	3.2	16
65	Functional Characterization of UDP-apiose Synthases from Bryophytes and Green Algae Provides Insight into the Appearance of Apiose-containing Glycans during Plant Evolution. Journal of Biological Chemistry, 2016, 291, 21434-21447.	3.4	16
66	Protocols for isolating and characterizing polysaccharides from plant cell walls: a case study using rhamnogalacturonan-II. Biotechnology for Biofuels, 2021, 14, 142.	6.2	14
67	A DE1 BINDING FACTOR 1â€"GLABRA2 module regulates rhamnogalacturonan I biosynthesis in Arabidopsis seed coat mucilage. Plant Cell, 2022, 34, 1396-1414.	6.6	14
68	Structural Characterization of the Heteroxylans from Poplar and Switchgrass. , 2012, 908, 215-228.		13
69	Improved procedures for the selective chemical fragmentation of rhamnogalacturonans. Carbohydrate Research, 2009, 344, 1852-1857.	2.3	12
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73	Rhamnogalacturonan-II, a pectic polysaccharide in the walls of growing plant cell, forms a dimer that is covalently cross-linked by a borate ester. In vitro conditions for the formation and hydrolysis of the dimer.. Journal of Biological Chemistry, 1997, 272, 3869.	3.4	4
74	Identification of two functional xyloglucan galactosyltransferase homologs <i>BrMUR3</i> and <i>BoMUR3</i> in brassicaceous vegetables. PeerJ, 2020, 8, e9095.	2.0	3