Rachel A Burton

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2700344/publications.pdf

Version: 2024-02-01

116 papers	7,666 citations	61857 43 h-index	56606 83 g-index
123 all docs	123 docs citations	123 times ranked	7516 citing authors

#	Article	IF	Citations
1	Heterogeneity in the chemistry, structure and function of plant cell walls. Nature Chemical Biology, 2010, 6, 724-732.	3.9	509
2	An Arabidopsis Callose Synthase, GSL5, Is Required for Wound and Papillary Callose Formation. Plant Cell, 2003, 15, 2503-2513.	3.1	443
3	Cellulose Synthase-Like CslF Genes Mediate the Synthesis of Cell Wall (1,3;1,4)-Â-D-Glucans. Science, 2006, 311, 1940-1942.	6.0	422
4	The CesA Gene Family of Barley. Quantitative Analysis of Transcripts Reveals Two Groups of Co-Expressed Genes. Plant Physiology, 2004, 134, 224-236.	2.3	275
5	Virus-Induced Silencing of a Plant Cellulose Synthase Gene. Plant Cell, 2000, 12, 691-705.	3.1	249
6	A barley <i>cellulose synthase-like CSLH</i> gene mediates (1,3;1,4)-Î²- <scp>d</scp> -glucan synthesis in transgenic <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5996-6001.	3.3	246
7	Fruit Calcium: Transport and Physiology. Frontiers in Plant Science, 2016, 7, 569.	1.7	233
8	Cell-Specific Vacuolar Calcium Storage Mediated by <i>CAX1</i> Regulates Apoplastic Calcium Concentration, Gas Exchange, and Plant Productivity in <i>Arabidopsis</i> Â Â. Plant Cell, 2011, 23, 240-257.	3.1	222
9	Starch granule initiation and growth are altered in barley mutants that lack isoamylase activity. Plant Journal, 2002, 31, 97-112.	2.8	219
10	The Genetics and Transcriptional Profiles of the Cellulose Synthase-Like <i>HvCslF</i> Gene Family in Barley. Plant Physiology, 2008, 146, 1821-1833.	2.3	204
11	Plant cell wall biosynthesis: genetic, biochemical and functional genomics approaches to the identification of key genes. Plant Biotechnology Journal, 2006, 4, 145-167.	4.1	183
12	Overâ€expression of specific <i>HvCslF</i> cellulose synthaseâ€like genes in transgenic barley increases the levels of cell wall (1,3;1,4)â€Î²â€<scp>d</scp>â€glucans and alters their fine structure. Plant Biotechnology Journal, 2011, 9, 117-135.	4.1	171
13	REVIEW: Variability in Fine Structures of Noncellulosic Cell Wall Polysaccharides from Cereal Grains: Potential Importance in Human Health and Nutrition. Cereal Chemistry, 2010, 87, 272-282.	1.1	167
14	Starch branching enzymes belonging to distinct enzyme families are differentially expressed during pea embryo development. Plant Journal, 1995, 7, 3-15.	2.8	165
15	(1,3;1,4)-Î²-D-Glucans in Cell Walls of the Poaceae, Lower Plants, and Fungi: A Tale of Two Linkages. Molecular Plant, 2009, 2, 873-882.	3.9	164
16	Root cell wall solutions for crop plants in saline soils. Plant Science, 2018, 269, 47-55.	1.7	159
17	Bifunctional Family 3 Glycoside Hydrolases from Barley with Î±-l-Arabinofuranosidase and Î²-d-Xylosidase Activity. Journal of Biological Chemistry, 2003, 278, 5377-5387.	1.6	156
18	Temporal and spatial appearance of wall polysaccharides during cellularization of barley (Hordeum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.6	130

#	Article	IF	Citations
19	Differential accumulation of callose, arabinoxylan and cellulose in nonpenetrated versus penetrated papillae on leaves of barley infected with <i>Blumeria graminis</i> f. sp. <i>hordei</i>. New Phytologist, 2014, 204, 650-660.	3.5	125
20	Evolution and development of cell walls in cereal grains. Frontiers in Plant Science, 2014, 5, 456.	1.7	124
21	Revised Phylogeny of the <i>Cellulose Synthase</i> Gene Superfamily: Insights into Cell Wall Evolution. Plant Physiology, 2018, 177, 1124-1141.	2.3	118
22	Grape marc as a source of carbohydrates for bioethanol: Chemical composition, pre-treatment and saccharification. Bioresource Technology, 2015, 193, 76-83.	4.8	105
23	Characterization of the Genes Encoding the Cytosolic and Plastidial Forms of ADP-Glucose Pyrophosphorylase in Wheat Endosperm. Plant Physiology, 2002, 130, 1464-1475.	2.3	100
24	Current challenges in cell wall biology in the cereals and grasses. Frontiers in Plant Science, 2012, 3, 130.	1.7	84
25	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. Biochemical Journal, 2001, 356, 181-189.	1.7	75
26	Prospecting for Energy-Rich Renewable Raw Materials: Agave Leaf Case Study. PLoS ONE, 2015, 10, e0135382.	1.1	73
27	A Single Limit Dextrinase Gene Is Expressed Both in the Developing Endosperm and in Germinated Grains of Barley1. Plant Physiology, 1999, 119, 859-872.	2.3	70
28	Discovery of Cyclotide-Like Protein Sequences in Graminaceous Crop Plants: Ancestral Precursors of Circular Proteins?. Plant Cell, 2006, 18, 2134-2144.	3.1	70
29	Biochemical evidence linking a putative callose synthase gene with (1â†’3)-Î²-d-glucan biosynthesis in barley. Plant Molecular Biology, 2003, 53, 213-225.	2.0	68
30	Plant cell wall engineering: applications in biofuel production and improved human health. Current Opinion in Biotechnology, 2014, 26, 79-84.	3.3	67
31	Molecular cloning of a cDNA encoding a (1â†’4)-Î²-mannan endohydrolase from the seeds of germinated tomato (Lycopersicon esculentum). Planta, 1997, 203, 454-459.	1.6	66
32	Quantitative structural organisation model for wheat endosperm cell walls: Cellulose as an important constituent. Carbohydrate Polymers, 2018, 196, 199-208.	5.1	61
33	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. Biochemical Journal, 2001, 356, 181.	1.7	59
34	A genome wide association scan for (1,3;1,4)-Î²-glucan content in the grain of contemporary 2-row Spring and Winter barleys. BMC Genomics, 2014, 15, 907.	1.2	57
35	Genome Wide Association Mapping for Arabinoxylan Content in a Collection of Tetraploid Wheats. PLoS ONE, 2015, 10, e0132787.	1.1	56
36	Evolutionary Dynamics of the Cellulose Synthase Gene Superfamily in Grasses. Plant Physiology, 2015, 168, 968-983.	2.3	55

#	Article	IF	Citations
37	Powerful regulatory systems and post-transcriptional gene silencing resist increases in cellulose content in cell walls of barley. BMC Plant Biology, 2015, 15, 62.	1.6	52
38	The barley (<i>Hordeum vulgare</i>) cellulose synthaseâ€like D2 gene (<i>HvCslD2</i>) mediates penetration resistance to hostâ€adapted and nonhost isolates of the powdery mildew fungus. New Phytologist, 2016, 212, 421-433.	3.5	52
39	Pattern of Deposition of Cell Wall Polysaccharides and Transcript Abundance of Related Cell Wall Synthesis Genes during Differentiation in Barley Endosperm. Plant Physiology, 2012, 159, 655-670.	2.3	50
40	Spatial gradients in cell wall composition and transcriptional profiles along elongating maize internodes. BMC Plant Biology, 2014, 14, 27.	1.6	50
41	Loss of LOFSEP Transcription Factor Function Converts Spikelet to Leaf-Like Structures in Rice. Plant Physiology, 2018, 176, 1646-1664.	2.3	49
42	Grain development in Brachypodium and other grasses: possible interactions between cell expansion, starch deposition, and cell-wall synthesis. Journal of Experimental Botany, 2013, 64, 5033-5047.	2.4	48
43	The Dynamics of Transcript Abundance during Cellularization of Developing Barley Endosperm. Plant Physiology, 2016, 170, 1549-1565.	2.3	47
44	Structural Variation and Content of Arabinoxylans in Endosperm and Bran of Durum Wheat (<i>Triticum turgidum</i> L.). Journal of Agricultural and Food Chemistry, 2016, 64, 2883-2892.	2.4	47
45	Hydrolysis of (1,4)-Î²-D-mannans in barley (Hordeum vulgare L.) is mediated by the concerted action of (1,4)-Î²-D-mannan endohydrolase and Î²-D-mannosidase. Biochemical Journal, 2006, 399, 77-90.	1.7	46
46	Differences in glycosyltransferase family 61 accompany variation in seed coat mucilage composition in<i>Plantago</i>spp.. Journal of Experimental Botany, 2016, 67, 6481-6495.	2.4	46
47	Protocol: a fast and simple in situ PCR method for localising gene expression in plant tissue. Plant Methods, 2014, 10, 29.	1.9	45
48	Downâ€regulation of the <i>glucan synthaseâ€like 6</i> gene (<i>HvGsl6</i>) in barley leads to decreased callose accumulation and increased cell wall penetration by <i>Blumeria graminis</i> f. sp. <i>hordei</i>. New Phytologist, 2016, 212, 434-443.	3.5	41
49	The dynamics of cereal cyst nematode infection differ between susceptible and resistant barley cultivars and lead to changes in (1,3;1,4)â€Î²â€glucan levels and <scp><i>HvCslF</i></scp> gene transcript abundance. New Phytologist, 2015, 207, 135-147.	3.5	40
50	Genetic Diversity and Genome Wide Association Study of Î²-Glucan Content in Tetraploid Wheat Grains. PLoS ONE, 2016, 11, e0152590.	1.1	40
51	The Barley Genome Sequence Assembly Reveals Three Additional Members of the CslF (1,3;1,4)-Î²-Glucan Synthase Gene Family. PLoS ONE, 2014, 9, e90888.	1.1	39
52	A Customized Gene Expression Microarray Reveals That the Brittle Stem Phenotype <i>fs2</i> of Barley Is Attributable to a Retroelement in the <i>HvCesA4</i> Cellulose Synthase Gene Â Â. Plant Physiology, 2010, 153, 1716-1728.	2.3	37
53	(1,3;1,4)-Î²-Glucan Biosynthesis by the CSLF6 Enzyme: Position and Flexibility of Catalytic Residues Influence Product Fine Structure. Biochemistry, 2016, 55, 2054-2061.	1.2	37
54	The CELLULOSE-SYNTHASE LIKE C (CSLC) Family of Barley Includes Members that Are Integral Membrane Proteins Targeted to the Plasma Membrane. Molecular Plant, 2009, 2, 1025-1039.	3.9	36

#	ARTICLE	IF	CITATIONS
55	Isolation and structural elucidation by 2D NMR of planteose, a major oligosaccharide in the mucilage of chia (Salvia hispanica L.) seeds. Carbohydrate Polymers, 2017, 175, 231-240.	5.1	36
56	Endo-(1,4)-Î²-Glucanase gene families in the grasses: temporal and spatial Co-transcription of orthologous genes1. BMC Plant Biology, 2012, 12, 235.	1.6	35
57	Targeted mutation of barley (1,3;1,4)â€Î²â€glucan synthases reveals complex relationships between the storage and cell wall polysaccharide content. Plant Journal, 2020, 104, 1009-1022.	2.8	35
58	MADS1 maintains barley spike morphology at high ambient temperatures. Nature Plants, 2021, 7, 1093-1107.	4.7	35
59	Expression of vacuolar H+-pyrophosphatase (OVP3) is under control of an anoxia-inducible promoter in rice. Plant Molecular Biology, 2010, 72, 47-60.	2.0	34
60	Functional Specialization of Cellulose Synthase Isoforms in a Moss Shows Parallels with Seed Plants. Plant Physiology, 2017, 175, 210-222.	2.3	34
61	Consumer and health-related traits of seed from selected commercial and breeding lines of industrial hemp, Cannabis sativa L.. Journal of Agriculture and Food Research, 2020, 2, 100025.	1.2	34
62	Distribution, structure and biosynthetic gene families of (1,3;1,4)â€Î²â€glucan in <i>Sorghum bicolor</i>. Journal of Integrative Plant Biology, 2015, 57, 429-445.	4.1	33
63	Accumulation of volatile phenol glycoconjugates in grapes following grapevine exposure to smoke and potential mitigation of smoke taint by foliar application of kaolin. Planta, 2019, 249, 941-952.	1.6	31
64	Altered Expression of Genes Implicated in Xylan Biosynthesis Affects Penetration Resistance against Powdery Mildew. Frontiers in Plant Science, 2017, 8, 445.	1.7	30
65	A Genome Wide Association Study of arabinoxylan content in 2-row spring barley grain. PLoS ONE, 2017, 12, e0182537.	1.1	29
66	Isolation of tissues and preservation of <scp>RNA</scp> from intact, germinated barley grain. Plant Journal, 2017, 91, 754-765.	2.8	28
67	Genetic analysis of grain and malt quality in an elite barley population. Molecular Breeding, 2016, 36, 1.	1.0	26
68	Agave: A promising feedstock for biofuels in the water-energy-food-environment (WEFE) nexus. Journal of Cleaner Production, 2020, 261, 121283.	4.6	26
69	Virus-Induced Silencing of a Plant Cellulose Synthase Gene. Plant Cell, 2000, 12, 691.	3.1	25
70	Differences in hydrolytic enzyme activity accompany natural variation in mature aleurone morphology in barley (Hordeum vulgare L.). Scientific Reports, 2018, 8, 11025.	1.6	25
71	A Novel (1,4)-Î²-Linked Glucoxylan Is Synthesized by Members of the <i>Cellulose Synthase-Like F</i> Gene Family in Land Plants. ACS Central Science, 2019, 5, 73-84.	5.3	25
72	Morphology, Carbohydrate Distribution, Gene Expression, and Enzymatic Activities Related to Cell Wall Hydrolysis in Four Barley Varieties during Simulated Malting. Frontiers in Plant Science, 2017, 8, 1872.	1.7	24

#	Article	IF	Citations
73	Biochemical Compositional Analysis and Kinetic Modeling of Hydrothermal Carbonization of Australian Saltbush. Energy & Fuels, 2019, 33, 12469-12479.	2.5	24
74	Barley grain (1,3;1,4)-Î²-glucan content: effects of transcript and sequence variation in genes encoding the corresponding synthase and endohydrolase enzymes. Scientific Reports, 2019, 9, 17250.	1.6	24
75	A Genome-Wide Association Study for Culm Cellulose Content in Barley Reveals Candidate Genes Co-Expressed with Members of the CELLULOSE SYNTHASE A Gene Family. PLoS ONE, 2015, 10, e0130890.	1.1	24
76	Genetic and environmental factors contribute to variation in cell wall composition in mature desi chickpea (<i>Cicer arietinum</i>L.) cotyledons. Plant, Cell and Environment, 2018, 41, 2195-2208.	2.8	23
77	Functional Characterization of a Glycosyltransferase from the Moss <i>Physcomitrella patens</i> Involved in the Biosynthesis of a Novel Cell Wall Arabinoglucan. Plant Cell, 2018, 30, 1293-1308.	3.1	22
78	Dissecting the Genetic Basis for Seed Coat Mucilage Heteroxylan Biosynthesis in Plantago ovata Using Gamma Irradiation and Infrared Spectroscopy. Frontiers in Plant Science, 2017, 8, 326.	1.7	20
79	Analysis of the (1,3)-Î²-d-glucan synthase gene family of barley. Phytochemistry, 2009, 70, 713-720.	1.4	19
80	Overexpression of HvCslF6 in barley grain alters carbohydrate partitioning plus transfer tissue and endosperm development. Journal of Experimental Botany, 2020, 71, 138-153.	2.4	18
81	Heterologous and Cell-Free Protein Expression Systems. Methods in Molecular Biology, 2009, 513, 175-198.	0.4	17
82	Cell Wall Modifications in Maize Pulvini in Response to Gravitational Stress Â Â. Plant Physiology, 2011, 156, 2155-2171.	2.3	17
83	Differential expression of the HvCslF6 gene late in grain development may explain quantitative differences in (1,3;1,4)-Î²-glucan concentration in barley. Molecular Breeding, 2015, 35, 20.	1.0	17
84	Transcriptional and biochemical analyses of gibberellin expression and content in germinated barley grain. Journal of Experimental Botany, 2020, 71, 1870-1884.	2.4	17
85	Genome-wide association study reveals the genetic complexity of fructan accumulation patterns in barley grain. Journal of Experimental Botany, 2021, 72, 2383-2402.	2.4	17
86	Genetics and physiology of cell wall polysaccharides in the model C4 grass, Setaria viridis spp. BMC Plant Biology, 2015, 15, 236.	1.6	16
87	The Genetics, Transcriptional Profiles, and Catalytic Properties of UDP-<i>Î±</i>-<scp>d</scp>-Xylose 4-Epimerases from Barley Â. Plant Physiology, 2010, 153, 555-568.	2.3	15
88	Transcript Profiling of MIKCc MADS-Box Genes Reveals Conserved and Novel Roles in Barley Inflorescence Development. Frontiers in Plant Science, 2021, 12, 705286.	1.7	15
89	Plant cell wall polysaccharide biosynthesis: real progress in the identification of participating genes. Planta, 2005, 221, 309-312.	1.6	14
90	The gooâ€d stuff: <i>Plantago</i> as a myxospermous model with modern utility. New Phytologist, 2021, 229, 1917-1923.	3.5	14

#	Article	IF	Citations
91	The composition of Australian Plantago seeds highlights their potential as nutritionally-rich functional food ingredients. Scientific Reports, 2021, 11, 12692.	1.6	14
92	Genetics, Transcriptional Profiles, and Catalytic Properties of the UDP-Arabinose Mutase Family from Barley. Biochemistry, 2016, 55, 322-334.	1.2	13
93	Method for hullâ€less barley transformation and manipulation of grain mixedâ€linkage betaâ€glucan. Journal of Integrative Plant Biology, 2018, 60, 382-396.	4.1	13
94	Analysis of the arabinoxylan arabinofuranohydrolase gene family in barley does not support their involvement in the remodelling of endosperm cell walls during development. Journal of Experimental Botany, 2012, 63, 3031-3045.	2.4	12
95	The novel features of Plantago ovata seed mucilage accumulation, storage and release. Scientific Reports, 2020, 10, 11766.	1.6	12
96	The effect of zinc fertilisation and arbuscular mycorrhizal fungi on grain quality and yield of contrasting barley cultivars. Functional Plant Biology, 2020, 47, 122.	1.1	12
97	Nutritional properties of selected superfood extracts and their potential health benefits. PeerJ, 2021, 9, e12525.	0.9	12
98	Combining transcriptional datasets using the generalized singular value decomposition. BMC Bioinformatics, 2008, 9, 335.	1.2	11
99	Elucidating the degradation reaction pathways for the hydrothermal carbonisation of hemp via biochemical compositional analysis. Fuel, 2021, 294, 120450.	3.4	11
100	Gene structure and a possible cytoplasmic location for (1â†'3)-Î²-glucanase isoenzyme GI from barley (Hordeum vulgare). Plant Science, 1998, 135, 39-47.	1.7	10
101	Water uptake in barley grain: Physiology; genetics and industrial applications. Plant Science, 2016, 242, 260-269.	1.7	10
102	A small-scale fractionation pipeline for rapid analysis of seed mucilage characteristics. Plant Methods, 2020, 16, 20.	1.9	10
103	Low-Input Fermentations of Agave tequilana Leaf Juice Generate High Returns on Ethanol Yields. Bioenergy Research, 2016, 9, 1142-1154.	2.2	9
104	Natural Variation in Ovule Morphology Is Influenced by Multiple Tissues and Impacts Downstream Grain Development in Barley (Hordeum vulgare L.). Frontiers in Plant Science, 2019, 10, 1374.	1.7	9
105	Hydrothermal Carbonization of Australian Saltbush. Energy & Fuels, 2019, 33, 1157-1166.	2.5	9
106	Variation in barley (1Ââ†' 3, 1Ââ†'Â4)-Î²-glucan endohydrolases reveals novel allozymes with increased thermostability. Theoretical and Applied Genetics, 2017, 130, 1053-1063.	1.8	6
107	Prospecting for Energy-Rich Renewable Raw Materials: Sorghum Stem Case Study. PLoS ONE, 2016, 11, e0156638.	1.1	6
108	Non-cellulosic cell wall polysaccharides are subject to genotypeÂÃ—Âenvironment effects in sorghum (Sorghum bicolor) grain. Journal of Cereal Science, 2015, 63, 64-71.	1.8	5

#	Article	IF	Citations
109	Effect of Processing on Viscosity and Molecular Weight of (1,3)(1,4)â€Î²â€Glucan in Western Australian Oat Cultivars. Cereal Chemistry, 2017, 94, 625-632.	1.1	5
110	Rain events at maturity severely impact the seed quality of psyllium (<i>Plantago ovata</i> Forssk.). Journal of Agronomy and Crop Science, 2022, 208, 567-581.	1.7	3
111	The first long-read nuclear genome assembly of Oryza australiensis, a wild rice from northern Australia. Scientific Reports, 2022, 12, .	1.6	3
112	Analysis of Genetic Diversity in the Traditional Chinese Medicine Plant â€˜Kushenâ€™ (Sophora flavescens) Tj ETQq0 0 0 rgBT /Overlock	1.7	2
113	Deconstructing plant biomass: cell wall structure and novel manipulation strategies.. , 2013, , 135-150.		2
114	Novel Barley (1â†’3,1â†’4)-Î²-Glucan Endohydrolase Alleles Confer Increased Enzyme Thermostability. Journal of Agricultural and Food Chemistry, 2017, 65, 421-428.	2.4	1
115	Functional Analysis of Polysaccharide Synthases Responsible for Cell Wall Synthesis in Higher Plants. Progress in Biotechnology, 2001, 18, 77-84.	0.2	0
116	The Mechanism and Control of Tam3 Transposition. , 1991, , 317-332.		0