Rachel A Burton

List of Publications by Year in Descending Order

119 papers	5,816 citations	38 h-index	74 g-index
123 ext. papers	6,905 ext. citations	6.6 avg, IF	5.61 L-index

#	Paper	IF	Citations
119	Nutritional properties of selected superfood extracts and their potential health benefits.. *PeerJ*, **2021**, 9, e12525	3.1	0
118	The composition of Australian Plantago seeds highlights their potential as nutritionally-rich functional food ingredients. *Scientific Reports*, **2021**, 11, 12692	4.9	1
117	Elucidating the degradation reaction pathways for the hydrothermal carbonisation of hemp via biochemical compositional analysis. *Fuel*, **2021**, 294, 120450	7.1	4
116	MADS1 maintains barley spike morphology at high ambient temperatures. *Nature Plants*, **2021**, 7, 1093-1107	11.5	7
115	The goo-d stuff: Plantago as a myxospermous model with modern utility. *New Phytologist*, **2021**, 229, 1917-1923	9.8	2
114	Analysis of Genetic Diversity in the Traditional Chinese Medicine Plant (Kushen) (Ait.). *Frontiers in Plant Science*, **2021**, 12, 704201	6.2	0
113	Transcript Profiling of MIKCc MADS-Box Genes Reveals Conserved and Novel Roles in Barley Inflorescence Development. *Frontiers in Plant Science*, **2021**, 12, 705286	6.2	1
112	Genome-wide association study reveals the genetic complexity of fructan accumulation patterns in barley grain. *Journal of Experimental Botany*, **2021**, 72, 2383-2402	7	5
111	A small-scale fractionation pipeline for rapid analysis of seed mucilage characteristics. *Plant Methods*, **2020**, 16, 20	5.8	5
110	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	2.6	22
109	The effect of zinc fertilisation and arbuscular mycorrhizal fungi on grain quality and yield of contrasting barley cultivars. *Functional Plant Biology*, **2020**, 47, 122-133	2.7	6
108	Agave: A promising feedstock for biofuels in the water-energy-food-environment (WEFE) nexus. *Journal of Cleaner Production*, **2020**, 261, 121283	10.3	11
107	Transcriptional and biochemical analyses of gibberellin expression and content in germinated barley grain. *Journal of Experimental Botany*, **2020**, 71, 1870-1884	7	11
106	The novel features of Plantago ovata seed mucilage accumulation, storage and release. *Scientific Reports*, **2020**, 10, 11766	4.9	4
105	Targeted mutation of barley (1,3;1,4)-β-glucan synthases reveals complex relationships between the storage and cell wall polysaccharide content. *Plant Journal*, **2020**, 104, 1009-1022	6.9	11
104	Overexpression of HvCslF6 in barley grain alters carbohydrate partitioning plus transfer tissue and endosperm development. *Journal of Experimental Botany*, **2020**, 71, 138-153	7	10
103	Biochemical Compositional Analysis and Kinetic Modeling of Hydrothermal Carbonization of Australian Saltbush. *Energy & Fuels*, **2019**, 33, 12469-12479	4.1	12

102	Barley grain (1,3;1,4)-β-glucan content: effects of transcript and sequence variation in genes encoding the corresponding synthase and endohydrolase enzymes. *Scientific Reports*, **2019**, 9, 17250	4.9	8
101	Natural Variation in Ovule Morphology Is Influenced by Multiple Tissues and Impacts Downstream Grain Development in Barley (L.). *Frontiers in Plant Science*, **2019**, 10, 1374	6.2	6
100	Hydrothermal Carbonization of Australian Saltbush. *Energy & Fuels*, **2019**, 33, 1157-1166	4.1	6
99	A Novel (1,4)-β-Linked Glucoxylan Is Synthesized by Members of the Gene Family in Land Plants. *ACS Central Science*, **2019**, 5, 73-84	16.8	15
98	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	4.7	21
97	Functional Characterization of a Glycosyltransferase from the Moss Involved in the Biosynthesis of a Novel Cell Wall Arabinoglucan. *Plant Cell*, **2018**, 30, 1293-1308	11.6	12
96	Genetic and environmental factors contribute to variation in cell wall composition in mature desi chickpea (Cicer arietinum L.) cotyledons. *Plant, Cell and Environment*, **2018**, 41, 2195-2208	8.4	18
95	Root cell wall solutions for crop plants in saline soils. *Plant Science*, **2018**, 269, 47-55	5.3	87
94	Method for hull-less barley transformation and manipulation of grain mixed-linkage beta-glucan. *Journal of Integrative Plant Biology*, **2018**, 60, 382-396	8.3	8
93	Differences in hydrolytic enzyme activity accompany natural variation in mature aleurone morphology in barley (Hordeum vulgare L.). *Scientific Reports*, **2018**, 8, 11025	4.9	17
92	Loss of LOFSEP Transcription Factor Function Converts Spikelet to Leaf-Like Structures in Rice. *Plant Physiology*, **2018**, 176, 1646-1664	6.6	33
91	Role, Importance and Biosynthesis of Cell Wall-Bound Phenolic Acids in Cereals **2018**, 737-766		3
90	Biosynthesis of Plant Cell Wall and Related Polysaccharides by Enzymes of the GT2 and GT48 Families **2018**, 109-165		3
89	New Insights into the Composition and Structure of Seed Mucilage **2018**, 63-104		7
88	Quantitative structural organisation model for wheat endosperm cell walls: Cellulose as an important constituent. *Carbohydrate Polymers*, **2018**, 196, 199-208	10.3	41
87	Revised Phylogeny of the Gene Superfamily: Insights into Cell Wall Evolution. *Plant Physiology*, **2018**, 177, 1124-1141	6.6	64
86	Effect of Processing on Viscosity and Molecular Weight of (1,3)(1,4)-β-Glucan in Western Australian Oat Cultivars. *Cereal Chemistry*, **2017**, 94, 625-632	2.4	5
85	Isolation of tissues and preservation of RNA from intact, germinated barley grain. *Plant Journal*, **2017**, 91, 754-765	6.9	17

84	Variation in barley (1→3, 1→4)-β-glucan endohydrolases reveals novel allozymes with increased thermostability. *Theoretical and Applied Genetics*, **2017**, 130, 1053-1063	6	5
83	Novel Barley (1->3,1->4)-β-Glucan Endohydrolase Alleles Confer Increased Enzyme Thermostability. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 421-428	5.7	0
82	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	10.3	21
81	Functional Specialization of Cellulose Synthase Isoforms in a Moss Shows Parallels with Seed Plants. *Plant Physiology*, **2017**, 175, 210-222	6.6	21
80	Dissecting the Genetic Basis for Seed Coat Mucilage Heteroxylan Biosynthesis in Using Gamma Irradiation and Infrared Spectroscopy. *Frontiers in Plant Science*, **2017**, 8, 326	6.2	13
79	Altered Expression of Genes Implicated in Xylan Biosynthesis Affects Penetration Resistance against Powdery Mildew. *Frontiers in Plant Science*, **2017**, 8, 445	6.2	15
78	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	6.2	17
77	A Genome Wide Association Study of arabinoxylan content in 2-row spring barley grain. *PLoS ONE*, **2017**, 12, e0182537	3.7	14
76	Down-regulation of the glucan synthase-like 6 gene (HvGsl6) in barley leads to decreased callose accumulation and increased cell wall penetration by Blumeria graminis f. sp. hordei. *New Phytologist*, **2016**, 212, 434-43	9.8	25
75	The barley (Hordeum vulgare) cellulose synthase-like D2 gene (HvCslD2) mediates penetration resistance to host-adapted and nonhost isolates of the powdery mildew fungus. *New Phytologist*, **2016**, 212, 421-33	9.8	39
74	Low-Input Fermentations of Agave tequilana Leaf Juice Generate High Returns on Ethanol Yields. *Bioenergy Research*, **2016**, 9, 1142-1154	3.1	7
73	The Dynamics of Transcript Abundance during Cellularization of Developing Barley Endosperm. *Plant Physiology*, **2016**, 170, 1549-65	6.6	23
72	(1,3;1,4)-β-Glucan Biosynthesis by the CSLF6 Enzyme: Position and Flexibility of Catalytic Residues Influence Product Fine Structure. *Biochemistry*, **2016**, 55, 2054-61	3.2	25
71	Structural Variation and Content of Arabinoxylans in Endosperm and Bran of Durum Wheat (Triticum turgidum L.). *Journal of Agricultural and Food Chemistry*, **2016**, 64, 2883-92	5.7	35
70	Water uptake in barley grain: Physiology; genetics and industrial applications. *Plant Science*, **2016**, 242, 260-269	5.3	7
69	Genetic Diversity and Genome Wide Association Study of β-Glucan Content in Tetraploid Wheat Grains. *PLoS ONE*, **2016**, 11, e0152590	3.7	30
68	Prospecting for Energy-Rich Renewable Raw Materials: Sorghum Stem Case Study. *PLoS ONE*, **2016**, 11, e0156638	3.7	5
67	Fruit Calcium: Transport and Physiology. *Frontiers in Plant Science*, **2016**, 7, 569	6.2	153

66	Differences in glycosyltransferase family 61 accompany variation in seed coat mucilage composition in Plantago spp. *Journal of Experimental Botany*, **2016**, 67, 6481-6495	7	24
65	Genetics, Transcriptional Profiles, and Catalytic Properties of the UDP-Arabinose Mutase Family from Barley. *Biochemistry*, **2016**, 55, 322-34	3.2	9
64	Genetic analysis of grain and malt quality in an elite barley population. *Molecular Breeding*, **2016**, 36, 1	3.4	16
63	Grape marc as a source of carbohydrates for bioethanol: Chemical composition, pre-treatment and saccharification. *Bioresource Technology*, **2015**, 193, 76-83	11	76
62	Evolutionary Dynamics of the Cellulose Synthase Gene Superfamily in Grasses. *Plant Physiology*, **2015**, 168, 968-83	6.6	35
61	Non-cellulosic cell wall polysaccharides are subject to genotype□environment effects in sorghum (Sorghum bicolor) grain. *Journal of Cereal Science*, **2015**, 63, 64-71	3.8	3
60	Differential expression of the gene late in grain development may explain quantitative differences in (1,3;1,4)-□glucan concentration in barley. *Molecular Breeding*, **2015**, 35, 20	3.4	13
59	Powerful regulatory systems and post-transcriptional gene silencing resist increases in cellulose content in cell walls of barley. *BMC Plant Biology*, **2015**, 15, 62	5.3	27
58	Distribution, structure and biosynthetic gene families of (1,3;1,4)-□glucan in Sorghum bicolor. *Journal of Integrative Plant Biology*, **2015**, 57, 429-45	8.3	22
57	Genetics and physiology of cell wall polysaccharides in the model C4 grass, Setaria viridis spp. *BMC Plant Biology*, **2015**, 15, 236	5.3	11
56	The dynamics of cereal cyst nematode infection differ between susceptible and resistant barley cultivars and lead to changes in (1,3;1,4)-□glucan levels and HvCslF gene transcript abundance. *New Phytologist*, **2015**, 207, 135-147	9.8	31
55	Prospecting for Energy-Rich Renewable Raw Materials: Agave Leaf Case Study. *PLoS ONE*, **2015**, 10, e0135382	3.7	51
54	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	3.7	15
53	Genome Wide Association Mapping for Arabinoxylan Content in a Collection of Tetraploid Wheats. *PLoS ONE*, **2015**, 10, e0132787	3.7	34
52	Plant cell wall engineering: applications in biofuel production and improved human health. *Current Opinion in Biotechnology*, **2014**, 26, 79-84	11.4	50
51	Evolution and development of cell walls in cereal grains. *Frontiers in Plant Science*, **2014**, 5, 456	6.2	88
50	Differential accumulation of callose, arabinoxylan and cellulose in nonpenetrated versus penetrated papillae on leaves of barley infected with Blumeria graminis f. sp. hordei. *New Phytologist*, **2014**, 204, 650-660	9.8	82
49	Protocol: a fast and simple in situ PCR method for localising gene expression in plant tissue. *Plant Methods*, **2014**, 10, 29	5.8	34

48	A genome wide association scan for (1,3;1,4)-β-glucan content in the grain of contemporary 2-row Spring and Winter barleys. *BMC Genomics*, **2014**, 15, 907	4.5	42
47	Spatial gradients in cell wall composition and transcriptional profiles along elongating maize internodes. *BMC Plant Biology*, **2014**, 14, 27	5.3	39
46	The barley genome sequence assembly reveals three additional members of the CslF (1,3;1,4)-β-glucan synthase gene family. *PLoS ONE*, **2014**, 9, e90888	3.7	29
45	Grain development in Brachypodium and other grasses: possible interactions between cell expansion, starch deposition, and cell-wall synthesis. *Journal of Experimental Botany*, **2013**, 64, 5033-47	7	40
44	Deconstructing plant biomass: cell wall structure and novel manipulation strategies. **2013**, 135-150		1
43	Endo-(1,4)-β-glucanase gene families in the grasses: temporal and spatial co-transcription of orthologous genes. *BMC Plant Biology*, **2012**, 12, 235	5.3	27
42	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, 655-70	6.6	38
41	Current challenges in cell wall biology in the cereals and grasses. *Frontiers in Plant Science*, **2012**, 3, 130	6.2	59
40	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, 3031-45	7	10
39	Over-expression of specific HvCslF cellulose synthase-like genes in transgenic barley increases the levels of cell wall (1,3;1,4)-β-glucans and alters their fine structure. *Plant Biotechnology Journal*, **2011**, 9, 117-35	11.6	131
38	Cell-specific vacuolar calcium storage mediated by CAX1 regulates apoplastic calcium concentration, gas exchange, and plant productivity in Arabidopsis. *Plant Cell*, **2011**, 23, 240-57	11.6	184
37	Cell wall modifications in maize pulvini in response to gravitational stress. *Plant Physiology*, **2011**, 156, 2155-71	6.6	13
36	Heterogeneity in the chemistry, structure and function of plant cell walls. *Nature Chemical Biology*, **2010**, 6, 724-32	11.7	398
35	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	2.4	125
34	The genetics, transcriptional profiles, and catalytic properties of UDP-alpha-D-xylose 4-epimerases from barley. *Plant Physiology*, **2010**, 153, 555-68	6.6	13
33	A customized gene expression microarray reveals that the brittle stem phenotype fs2 of barley is attributable to a retroelement in the HvCesA4 cellulose synthase gene. *Plant Physiology*, **2010**, 153, 1716-28	6.6	28
32	Biosynthesis of Plant Cell Wall and Related Polysaccharides by Enzymes of the GT2 and GT48 Families **2010**, 109-165		5
31	Expression of vacuolar H+-pyrophosphatase (OVP3) is under control of an anoxia-inducible promoter in rice. *Plant Molecular Biology*, **2010**, 72, 47-60	4.6	28

30	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, 1025-39	14.4	32
29	A barley cellulose synthase-like CSLH gene mediates (1,3;1,4)-beta-D-glucan synthesis in transgenic Arabidopsis. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 5996-6001	11.5	203
28	Analysis of the (1,3)-beta-D-glucan synthase gene family of barley. *Phytochemistry*, **2009**, 70, 713-20	4	18
27	(1,3;1,4)-beta-D-glucans in cell walls of the poaceae, lower plants, and fungi: a tale of two linkages. *Molecular Plant*, **2009**, 2, 873-82	14.4	132
26	Heterologous and cell free protein expression systems. *Methods in Molecular Biology*, **2009**, 513, 175-98	1.4	16
25	Combining transcriptional datasets using the generalized singular value decomposition. *BMC Bioinformatics*, **2008**, 9, 335	3.6	11
24	The genetics and transcriptional profiles of the cellulose synthase-like HvCslF gene family in barley. *Plant Physiology*, **2008**, 146, 1821-33	6.6	177
23	Discovery of cyclotide-like protein sequences in graminaceous crop plants: ancestral precursors of circular proteins?. *Plant Cell*, **2006**, 18, 2134-44	11.6	62
22	Cellulose synthase-like CslF genes mediate the synthesis of cell wall (1,3;1,4)-beta-D-glucans. *Science*, **2006**, 311, 1940-2	33.3	346
21	Hydrolysis of (1,4)-beta-D-mannans in barley (Hordeum vulgare L.) is mediated by the concerted action of (1,4)-beta-D-mannan endohydrolase and beta-D-mannosidase. *Biochemical Journal*, **2006**, 399, 77-90	3.8	42
20	Plant cell wall biosynthesis: genetic, biochemical and functional genomics approaches to the identification of key genes. *Plant Biotechnology Journal*, **2006**, 4, 145-67	11.6	158
19	Temporal and spatial appearance of wall polysaccharides during cellularization of barley (Hordeum vulgare) endosperm. *Planta*, **2006**, 224, 655-67	4.7	117
18	Plant cell wall polysaccharide biosynthesis: real progress in the identification of participating genes. *Planta*, **2005**, 221, 309-12	4.7	14
17	The CesA gene family of barley. Quantitative analysis of transcripts reveals two groups of co-expressed genes. *Plant Physiology*, **2004**, 134, 224-36	6.6	248
16	Biochemical evidence linking a putative callose synthase gene with (1 --> 3)-beta-D-glucan biosynthesis in barley. *Plant Molecular Biology*, **2003**, 53, 213-25	4.6	57
15	An Arabidopsis Callose Synthase, GSL5, Is Required for Wound and Papillary Callose Formation. *Plant Cell*, **2003**, 15, 2503-13	11.6	365
14	Bifunctional family 3 glycoside hydrolases from barley with alpha -L-arabinofuranosidase and beta -D-xylosidase activity. Characterization, primary structures, and COOH-terminal processing. *Journal of Biological Chemistry*, **2003**, 278, 5377-87	5.4	142
13	Starch granule initiation and growth are altered in barley mutants that lack isoamylase activity. *Plant Journal*, **2002**, 31, 97-112	6.9	193

12	Characterization of the genes encoding the cytosolic and plastidial forms of ADP-glucose pyrophosphorylase in wheat endosperm. *Plant Physiology*, **2002**, 130, 1464-75	6.6	94
11	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. *Biochemical Journal*, **2001**, 356, 181-189	3.8	72
10	Functional Analysis of Polysaccharide Synthases Responsible for Cell Wall Synthesis in Higher Plants. *Progress in Biotechnology*, **2001**, 18, 77-84		
9	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. *Biochemical Journal*, **2001**, 356, 181-9	3.8	53
8	Virus-induced silencing of a plant cellulose synthase gene. *Plant Cell*, **2000**, 12, 691-706	11.6	215
7	Virus-Induced Silencing of a Plant Cellulose Synthase Gene. *Plant Cell*, **2000**, 12, 691	11.6	3
6	A single limit dextrinase gene is expressed both in the developing endosperm and in germinated grains of barley. *Plant Physiology*, **1999**, 119, 859-71	6.6	65
5	Gene structure and a possible cytoplasmic location for (1->3)-□glucanase isoenzyme GI from barley (Hordeum vulgare). *Plant Science*, **1998**, 135, 39-47	5.3	10
4	Molecular cloning of a cDNA encoding a (1-->4)-beta-mannan endohydrolase from the seeds of germinated tomato (Lycopersicon esculentum). *Planta*, **1997**, 203, 454-9	4.7	57
3	Starch branching enzymes belonging to distinct enzyme families are differentially expressed during pea embryo development. *Plant Journal*, **1995**, 7, 3-15	6.9	144
2	The Mechanism and Control of Tam3 Transposition **1991**, 317-332		
1	GWAS reveals the genetic complexity of fructan accumulation patterns in barley grain		1