Maria Hrmova

List of Publications by Year
in descending order

113 papers	5,620 citations	66343 42 h-index	91884 69 g-index
118 all docs	118 docs citations	118 times ranked	5508 citing authors

#	Article	IF	Citations
1	Broad Specific Xyloglucan:Xyloglucosyl Transferases Are Formidable Players in the Re-Modelling of Plant Cell Wall Structures. International Journal of Molecular Sciences, 2022, 23, 1656.	4.1	18
2	Alluminating structure key to stress tolerance. Cell Research, 2022, 32, 5-6.	12.0	1
3	Plant Transcription Factors Involved in Drought and Associated Stresses. International Journal of Molecular Sciences, 2021, 22, 5662.	4.1	70
4	Potassium Alginate Oligosaccharides Alter Gut Microbiota, and Have Potential to Prevent the Development of Hypertension and Heart Failure in Spontaneously Hypertensive Rats. International Journal of Molecular Sciences, 2021, 22, 9823.	4.1	17
5	A single residue deletion in the barley HKT1;5 P189 variant restores plasma membrane localisation but not Na+ conductance. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183669.	2.6	5
6	DREB/CBF expression in wheat and barley using the stressâ€inducible promoters of <i>HDâ€Zip I</i> genes: impact on plant development, stress tolerance and yield. Plant Biotechnology Journal, 2020, 18, 829-844.	8.3	61
7	High affinity Na⁺ transport by wheat HKT1;5 is blocked by K⁺. Plant Direct, 2020, 4, e00275.	1.9	6
8	A single nucleotide substitution in <scp><i>TaHKT1</i></scp>;<scp><i>5â€D</i></scp> controls shoot Na⁺ accumulation in bread wheat. Plant, Cell and Environment, 2020, 43, 2158-2171.	5.7	18
9	Another building block in the plant cell wall: Barley xyloglucan xyloglucosyl transferases link covalently xyloglucan and anionic oligosaccharides derived from pectin. Plant Journal, 2020, 104, 752-767.	5.7	17
10	Plant Xyloglucan Xyloglucosyl Transferases and the Cell Wall Structure: Subtle but Significant. Molecules, 2020, 25, 5619.	3.8	28
11	Variation among S-locus haplotypes and among stylar RNases in almond. Scientific Reports, 2020, 10, 583.	3.3	8
12	Structural characterization of the Pet c 1.0201 PR-10 protein isolated from roots of Petroselinum crispum (Mill.) Fuss. Phytochemistry, 2020, 175, 112368.	2.9	3
13	Barley sodium content is regulated by natural variants of the Na+ transporter HvHKT1;5. Communications Biology, 2020, 3, 258.	4.4	21
14	Plant transporters involved in combating boron toxicity: beyond 3D structures. Biochemical Society Transactions, 2020, 48, 1683-1696.	3.4	22
15	Wheat wounding-responsive HD-Zip IV transcription factor GL7 is predominantly expressed in grain and activates genes encoding defensins. Plant Molecular Biology, 2019, 101, 41-61.	3.9	6
16	Discovery of processive catalysis by an exo-hydrolase with a pocket-shaped active site. Nature Communications, 2019, 10, 2222.	12.8	20
17	Engineering the acceptor substrate specificity in the xyloglucan endotransglycosylase TmXET6.3 from nasturtium seeds (Tropaeolum majus L.). Plant Molecular Biology, 2019, 100, 181-197.	3.9	16
18	The wheat TabZIP2 transcription factor is activated by the nutrient starvation-responsive SnRK3/CIPK protein kinase. Plant Molecular Biology, 2018, 96, 543-561.	3.9	23

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19	Structural variations in wheat HKT1;5 underpin differences in Na+ transport capacity. Cellular and Molecular Life Sciences, 2018, 75, 1133-1144.	5.4	45
20	Overexpression of the class I homeodomain transcription factor Ta<scp>HDZ</scp>iplâ€5 increases drought and frost tolerance in transgenic wheat. Plant Biotechnology Journal, 2018, 16, 1227-1240.	8.3	52
21	Overexpression of the <i>TaSHN1</i> transcription factor in bread wheat leads to leaf surface modifications, improved drought tolerance, and no yield penalty under controlled growth conditions. Plant, Cell and Environment, 2018, 41, 2549-2566.	5.7	50
22	Plants fighting back: to transport or not to transport, this is a structural question. Current Opinion in Plant Biology, 2018, 46, 68-76.	7.1	14
23	Structural Basis of the Permeation Function of Plant Aquaporins. Signaling and Communication in Plants, 2017, , 1-28.	0.7	20
24	Wheat drought-responsive WXPL transcription factors regulate cuticle biosynthesis genes. Plant Molecular Biology, 2017, 94, 15-32.	3.9	16
25	The homeodomain transcription factor Ta HDZ iplâ€2 from wheat regulates frost tolerance, flowering time and spike development in transgenic barley. New Phytologist, 2016, 211, 671-687.	7.3	26
26	Change of function of the wheat stressâ€responsive transcriptional repressor <i>Ta<scp>RAP</scp>2.1L</i> by repressor motif modification. Plant Biotechnology Journal, 2016, 14, 820-832.	8.3	32
27	Identification and characterization of wheat drought-responsive MYB transcription factors involved in the regulation of cuticle biosynthesis. Journal of Experimental Botany, 2016, 67, 5363-5380.	4.8	82
28	A Barley Efflux Transporter Operates in a Na⁺-Dependent Manner, as Revealed by a Multidisciplinary Platform. Plant Cell, 2016, 28, 202-218.	6.6	29
29	Identification of a Stelar-Localized Transport Protein That Facilitates Root-to-Shoot Transfer of Chloride in Arabidopsis. Plant Physiology, 2016, 170, 1014-1029.	4.8	100
30	Cell-Free Synthesis of a Functional Membrane Transporter into a Tethered Bilayer Lipid Membrane. Langmuir, 2016, 32, 2445-2449.	3.5	25
31	Molecular interactions of the Î³-clade homeodomain-leucine zipper class I transcription factors during the wheat response to water deficit. Plant Molecular Biology, 2016, 90, 435-452.	3.9	31
32	Basic leucine zipper (bZIP) transcription factors involved in abiotic stresses: A molecular model of a wheat bZIP factor and implications of its structure in function. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 46-56.	2.4	122
33	Developmentally regulated<i>HEART STOPPER</i>, a mitochondrially targeted L18 ribosomal protein gene, is required for cell division, differentiation, and seed development in<i>Arabidopsis</i>. Journal of Experimental Botany, 2015, 66, 5867-5880.	4.8	24
34	Constitutive overexpression of the<i>TaNF-YB4</i>gene in transgenic wheat significantly improves grain yield. Journal of Experimental Botany, 2015, 66, 6635-6650.	4.8	56
35	A Single Glycosidase Harnesses Different Pyranoside Ring Transition State Conformations for Hydrolysis of Mannosides and Glucosides. ACS Catalysis, 2015, 5, 6041-6051.	11.2	22
36	Endosperm transfer cell-specific genes and proteins: structure, function and applications in biotechnology. Frontiers in Plant Science, 2014, 5, 64.	3.6	19

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37	Expression patterns and protein structure of a lipid transfer protein END1 from Arabidopsis. Planta, 2014, 240, 1319-1334.	3.2	6
38	Enhancing Abiotic Stress Tolerance in Plants by Modulating Properties of Stress Responsive Transcription Factors. , 2014, , 291-316.		11
39	Transcriptional regulation of cuticle biosynthesis. Biotechnology Advances, 2014, 32, 526-540.	11.7	80
40	Close allies in membrane protein research: Cell-free synthesis and nanotechnology. Molecular Membrane Biology, 2013, 30, 229-245.	2.0	25
41	Cell-free protein synthesis of membrane (1,3)-Î²-d-glucan (curdlan) synthase: Co-translational insertion in liposomes and reconstitution in nanodiscs. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 743-757.	2.6	58
42	Role of Homeodomain Leucine Zipper (HD-Zip) IV Transcription Factors in Plant Development and Plant Protection from Deleterious Environmental Factors. International Journal of Molecular Sciences, 2013, 14, 8122-8147.	4.1	70
43	Plant High-Affinity Potassium (HKT) Transporters Involved in Salinity Tolerance: Structural Insights to Probe Differences in Ion Selectivity. International Journal of Molecular Sciences, 2013, 14, 7660-7680.	4.1	95
44	Structural analysis and insights into the glycon specificity of the rice GH1 Os7BGlu26 Î²-<scp>D</scp>-mannosidase. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 2124-2135.	2.5	11
45	Complex Regulation by Apetala2 Domain-Containing Transcription Factors Revealed through Analysis of the Stress-Responsive TdCor410b Promoter from Durum Wheat. PLoS ONE, 2013, 8, e58713.	2.5	34
46	Molecular modeling of S-RNases involved in almond self-incompatibility. Frontiers in Plant Science, 2012, 3, 139.	3.6	5
47	Characterization of the wheat gene encoding a grain-specific lipid transfer protein TdPR61, and promoter activity in wheat, barley and rice. Journal of Experimental Botany, 2012, 63, 2025-2040.	4.8	17
48	A Two-Staged Model of Na+ Exclusion in Rice Explained by 3D Modeling of HKT Transporters and Alternative Splicing. PLoS ONE, 2012, 7, e39865.	2.5	193
49	Modulation of plant growth by HDâ€Zip class I and II transcription factors in response to environmental stimuli. New Phytologist, 2011, 190, 823-837.	7.3	139
50	Polysaccharide microarrays for high-throughput screening of transglycosylase activities in plant extracts. Glycoconjugate Journal, 2010, 27, 79-87.	2.7	37
51	High-yield production, refolding and a molecular modelling of the catalytic module of (1,3)-Î²-d-glucan (curdlan) synthase from Agrobacterium sp.. Glycoconjugate Journal, 2010, 27, 461-476.	2.7	10
52	A Glimpse at Regulation of Nitrogen Homeostasis. Structure, 2010, 18, 1395-1397.	3.3	0
53	Defensin promoters as potential tools for engineering disease resistance in cereal grains. Plant Biotechnology Journal, 2010, 8, 47-64.	8.3	47
54	Heterologous expression of diverse barley XTH genes in the yeast Pichia pastoris. Plant Biotechnology, 2010, 27, 251-258.	1.0	16

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55	Boron Toxicity Tolerance in Barley through Reduced Expression of the Multifunctional Aquaporin HvNIP2;1 Â. Plant Physiology, 2010, 153, 1706-1715.	4.8	159
56	Crystallisation of Wild-Type and Variant Forms of a Recombinant Plant Enzyme Î²-D-Glucan Glucohydrolase from Barley (Hordeum vulgare L.) and Preliminary X-ray Analysis. International Journal of Molecular Sciences, 2010, 11, 2759-2769.	4.1	5
57	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.	4.8	15
58	Xyloglucan xyloglucosyl transferases from barley (Hordeum vulgare L.) bind oligomeric and polymeric xyloglucan molecules in their acceptor binding sites. Biochimica Et Biophysica Acta - General Subjects, 2010, 1800, 674-684.	2.4	19
59	High-level expression of barley Î²-d-glucan exohydrolase HvExoI from a codon-optimized cDNA in Pichia pastoris. Protein Expression and Purification, 2010, 73, 90-98.	1.3	9
60	Barley xyloglucan xyloglucosyl transferases bind xyloglucan-derived oligosaccharides in their acceptor-binding regions in multiple conformational states. Archives of Biochemistry and Biophysics, 2010, 496, 61-68.	3.0	7
61	Binding of Î²-<scp>d</scp>-Glucosides and Î²-<scp>d</scp>-Mannosides by Rice and Barley Î²-<scp>d</scp>-Glycosidases with Distinct Substrate Specificities. Biochemistry, 2010, 49, 8779-8793.	2.5	15
62	Characterization of the wheat endosperm transfer cell-specific protein TaPR60. Plant Molecular Biology, 2009, 71, 81-98.	3.9	46
63	Substrate specificity and catalytic mechanism of a xyloglucan xyloglucosyl transferase HvXET6 from barley (<i>Hordeumâ€ƒvulgare</i>â€ƒL.). FEBS Journal, 2009, 276, 437-456.	4.7	38
64	Hyphal cell walls from the plant pathogen <i>Rhynchosporiumâ€ƒsecalis</i> contain (1,3/1,6)â€Î²â€‹scp>d</scp>â€glucans, galactoâ€•and rhamnomannans, (1,3;1,4)â€Î²â€‹scp>d</scp>â€glucans and chitin. FEBS Journal, 2009, 276, 3698-3709.	4.7	38
65	Plant and Microbial Enzymes Involved in the Depolymerization of (1,3)-Î²-d-Glucans and Related Polysaccharides. , 2009, , 119-170.		6
66	Rice family GH1 glycoside hydrolases with Î²-d-glucosidase and Î²-d-mannosidase activities. Archives of Biochemistry and Biophysics, 2009, 491, 85-95.	3.0	52
67	A Chemoenzymatic Route to Conjugatable Î²(1â†'3)-Glucan Oligosaccharides. Australian Journal of Chemistry, 2009, 62, 575.	0.9	9
68	Molecular modeling of family GH16 glycoside hydrolases: Potential roles for xyloglucan transglucosylases/hydrolases in cell wall modification in the poaceae. Protein Science, 2009, 13, 3200-3213.	7.6	104
69	Heterologous and Cell-Free Protein Expression Systems. Methods in Molecular Biology, 2009, 513, 175-198.	0.9	17
70	Functional Genomics and Structural Biology in the Definition of Gene Function. Methods in Molecular Biology, 2009, 513, 199-227.	0.9	13
71	Sexual and Apomictic Seed Formation in Hieracium Requires the Plant Polycomb-Group Gene FERTILIZATION INDEPENDENT ENDOSPERM Â. Plant Cell, 2008, 20, 2372-2386.	6.6	53
72	A barley xyloglucan xyloglucosyl transferase covalently links xyloglucan, cellulosic substrates, and (1,3;1,4)-Î²-d-glucans. VOLUME 282 (2007) PAGES 12951-12962. Journal of Biological Chemistry, 2008, 283, 27344.	3.4	4

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73	A Barley Xyloglucan Xyloglucosyl Transferase Covalently Links Xyloglucan, Cellulosic Substrates, and (1,3;1,4)-Î²-D-Glucans. Journal of Biological Chemistry, 2007, 282, 12951-12962.	3.4	135
74	Dissecting the catalytic mechanism of a plant Î²-d-glucan glucohydrolase through structural biology using inhibitors and substrate analogues. Carbohydrate Research, 2007, 342, 1613-1623.	2.3	29
75	Cellulose Synthase-Like CslF Genes Mediate the Synthesis of Cell Wall (1,3;1,4)-Â-D-Glucans. Science, 2006, 311, 1940-1942.	12.6	422
76	Gene expression patterns and catalytic properties of UDP-D-glucose 4-epimerases from barley (Hordeum vulgare L.). Biochemical Journal, 2006, 394, 115-124.	3.7	46
77	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.	3.7	46
78	Plant cell wall biosynthesis: genetic, biochemical and functional genomics approaches to the identification of key genes. Plant Biotechnology Journal, 2006, 4, 145-167.	8.3	183
79	Reconstitution of cyanogenesis in barley (Hordeum vulgare L.) and its implications for resistance against the barley powdery mildew fungus. Planta, 2006, 223, 1010-1023.	3.2	34
80	Structural Rationale for Low-Nanomolar Binding of Transition State Mimics to a Family GH3 Î²-d-Glucan Glucohydrolase from Barleyâ€,â€¡. Biochemistry, 2005, 44, 16529-16539.	2.5	42
81	Three-dimensional Structure of the Barley Î²-d-Glucan Glucohydrolase in Complex with a Transition State Mimic. Journal of Biological Chemistry, 2004, 279, 4970-4980.	3.4	35
82	Members of a New Group of Chitinase-Like Genes are Expressed Preferentially in Cotton Cells with Secondary Walls. Plant Molecular Biology, 2004, 54, 353-372.	3.9	71
83	The Synthesis of 3-O-(Î²-D-Glucopyranosyl)- and 3-O-(Î²-Laminaribiosyl)-isofagomines, Potent Inhibitors of a 1,3-Î²-D-Glucan endo-Hydrolase. Australian Journal of Chemistry, 2004, 57, 187.	0.9	8
84	Biochemical evidence linking a putative callose synthase gene with (1â†'3)-Î²-d-glucan biosynthesis in barley. Plant Molecular Biology, 2003, 53, 213-225.	3.9	68
85	Synthesis of Complex Oligosaccharides by Using a Mutated (1,3)--D-Glucan Endohydrolase from Barley. Chemistry - A European Journal, 2003, 9, 2603-2610.	3.3	26
86	Bifunctional Family 3 Glycoside Hydrolases from Barley with Î±-l-Arabinofuranosidase and Î²-d-Xylosidase Activity. Journal of Biological Chemistry, 2003, 278, 5377-5387.	3.4	156
87	Mutated Barley (1,3)-Î²-d -Glucan Endohydrolases Synthesize Crystalline (1,3)-Î²-d -Glucans. Journal of Biological Chemistry, 2002, 277, 30102-30111.	3.4	79
88	Structural Basis for Broad Substrate Specificity in Higher Plant Î²-d-Glucan Glucohydrolases. Plant Cell, 2002, 14, 1033-1052.	6.6	89
89	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. Biochemical Journal, 2001, 356, 181-189.	3.7	75
90	Binding interactions between barley thaumatin-like proteins and (1,3)-Î²-D-glucans. FEBS Journal, 2001, 268, 4190-4199.	0.2	113

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91	Regulation of genes encoding Î² -d -glucan glucohydrolases in barley (Hordeum vulgare). Physiologia Plantarum, 2001, 113, 108-120.	5.2	14
92	Structure-function relationships of Î²- D-glucan endo- and exohydrolases from higher plants. , 2001, 47, 73-91.		110
93	Catalytic Mechanisms and Reaction Intermediates along the Hydrolytic Pathway of a Plant Î²-D-glucan Glucohydrolase. Structure, 2001, 9, 1005-1016.	3.3	73
94	Plant Enzyme Structure. Explaining Substrate Specificity and the Evolution of Function. Plant Physiology, 2001, 125, 54-57.	4.8	21
95	Barley arabinoxylan arabinofuranohydrolases: purification, characterization and determination of primary structures from cDNA clones. Biochemical Journal, 2001, 356, 181.	3.7	59
96	Comparative modeling of the three-dimensional structures of family 3 glycoside hydrolases. Proteins: Structure, Function and Bioinformatics, 2000, 41, 257-269.	2.6	109
97	A Single Limit Dextrinase Gene Is Expressed Both in the Developing Endosperm and in Germinated Grains of Barley1. Plant Physiology, 1999, 119, 859-872.	4.8	70
98	Three-dimensional structure of a barley Î²-D-glucan exohydrolase, a family 3 glycosyl hydrolase. Structure, 1999, 7, 179-190.	3.3	219
99	Crystallization and preliminary X-ray analysis of Î²-glucan exohydrolase isoenzyme ExoI from barley (Hordeum vulgare). Acta Crystallographica Section D: Biological Crystallography, 1998, 54, 687-689.	2.5	15
100	Substrate Binding and Catalytic Mechanism of a Barley Î²-d-Glucosidase/(1,4)-Î²-d-Glucan Exohydrolase. Journal of Biological Chemistry, 1998, 273, 11134-11143.	3.4	86
101	Polysaccharide hydrolases in germinated barley and their role in the depolymerization of plant and fungal cell walls. International Journal of Biological Macromolecules, 1997, 21, 67-72.	7.5	43
102	Purification and characterization of a (1 â†’ 3)-Î²-d-glucan endohydrolase from rice (Oryza sativa) bran. Carbohydrate Research, 1997, 297, 365-374.	2.3	25
103	Barley Î²-d-glucan exohydrolases. Substrate specificity and kinetic properties. Carbohydrate Research, 1997, 305, 209-221.	2.3	50
104	Barley Î²-D-Glucan Exohydrolases with Î²-D-Glucosidase Activity. Journal of Biological Chemistry, 1996, 271, 5277-5286.	3.4	137
105	Subsite Affinities and Disposition of Catalytic Amino Acids in the Substrate-binding Region of Barley 1,3-Î²-Glucanases. IMPLICATIONS IN PLANT-PATHOGEN INTERACTIONS. Journal of Biological Chemistry, 1995, 270, 14556-14563.	3.4	37
106	Immunomodulator polysaccharides: Chemistry, disposition and metabolism. Biopharmaceutics and Drug Disposition, 1993, 14, 187-198.	1.9	15
107	(1â€“3)-Î²-Glucan synthesis ofNeurospora crassa. Current Microbiology, 1989, 19, 153-161.	2.2	23
108	Cellulose- and xylan-degrading enzymes of Aspergillus terreus and Aspergillus niger. Enzyme and Microbial Technology, 1989, 11, 610-616.	3.2	66

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109	1,3-Î²-d-Glucan synthase ofNeurospora crassa: Partial purification and characterization of solubilized enzyme activity. Experimental Mycology, 1989, 13, 129-139.	1.6	23
110	Î²(1-3)Glucan synthase of Neurospora crassa: Solubilization and partial characterization. Experimental Mycology, 1988, 12, 141-150.	1.6	14
111	Protoplast formation ofNeurospora crassa by an inducible enzyme system ofArthrobacter GJM-1. Current Microbiology, 1987, 16, 33-38.	2.2	4
112	Specificity of cellulase and Î²-xylanase induction in Trichoderma reesei QM 9414. Archives of Microbiology, 1986, 144, 307-311.	2.2	95
113	Induction of cellulose- and xylan-degrading enzyme complex in the yeast Trichosporon cutaneum. Archives of Microbiology, 1984, 138, 371-376.	2.2	63