Mathew Gilliham

List of Publications by Year
in descending order

106 papers	9,787 citations	41344 49 h-index	38395 95 g-index
132 all docs	132 docs citations	132 times ranked	9373 citing authors

#	Article	IF	Citations
1	Salinity tolerance of crops â€“ what is the cost?. New Phytologist, 2015, 208, 668-673.	7.3	868
2	Wheat grain yield on saline soils is improved by an ancestral Na+ transporter gene. Nature Biotechnology, 2012, 30, 360-364.	17.5	690
3	Shoot Na+ Exclusion and Increased Salinity Tolerance Engineered by Cell Typeâ€“Specific Alteration of Na+ Transport in <i>Arabidopsis</i> Â Â. Plant Cell, 2009, 21, 2163-2178.	6.6	480
4	The Role of Plasma Membrane Intrinsic Protein Aquaporins in Water Transport through Roots: Diurnal and Drought Stress Responses Reveal Different Strategies between Isohydric and Anisohydric Cultivars of Grapevine Â. Plant Physiology, 2009, 149, 445-460.	4.8	431
5	Glutamate Receptorâ€“Like Genes Form Ca ²⁺ Channels in Pollen Tubes and Are Regulated by Pistil <scp> d </scp> -Serine. Science, 2011, 332, 434-437.	12.6	372
6	Comparative physiology of elemental distributions in plants. Annals of Botany, 2010, 105, 1081-1102.	2.9	288
7	Energy costs of salt tolerance in crop plants. New Phytologist, 2020, 225, 1072-1090.	7.3	284
8	GABA signalling modulates plant growth by directly regulating the activity of plant-specific anion transporters. Nature Communications, 2015, 6, 7879.	12.8	268
9	Fruit Calcium: Transport and Physiology. Frontiers in Plant Science, 2016, 7, 569.	3.6	233
10	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.	6.6	222
11	Salinity tolerance in soybean is modulated by natural variation in <i><scp>G</scp>m<scp>SALT</scp>3</i>. Plant Journal, 2014, 80, 937-950.	5.7	217
12	Calcium delivery and storage in plant leaves: exploring the link with water flow. Journal of Experimental Botany, 2011, 62, 2233-2250.	4.8	208
13	Î³-Aminobutyric acid (GABA) signalling in plants. Cellular and Molecular Life Sciences, 2017, 74, 1577-1603.	5.4	205
14	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. Journal of Experimental Botany, 2017, 68, 3129-3143.	4.8	187
15	The Na⁺ transporter, Ta<scp>HKT</scp>1;5â€Đ, limits shoot Na⁺ accumulation in bread wheat. Plant Journal, 2014, 80, 516-526.	5.7	170
16	Protocol: optimising hydroponic growth systems for nutritional and physiological analysis of Arabidopsis thaliana and other plants. Plant Methods, 2013, 9, 4.	4.3	167
17	Tissue tolerance: an essential but elusive trait for salt-tolerant crops. Functional Plant Biology, 2016, 43, 1103.	2.1	162
18	Root cell wall solutions for crop plants in saline soils. Plant Science, 2018, 269, 47-55.	3.6	159

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19	Rapid shootâ€toâ€root signalling regulates root hydraulic conductance via aquaporins. Plant, Cell and Environment, 2014, 37, 520-538.	5.7	155
20	Translating knowledge about abiotic stress tolerance to breeding programmes. Plant Journal, 2017, 90, 898-917.	5.7	154
21	Nonâ€selective cation channel activity of aquaporin AtPIP2;1 regulated by Ca²⁺ and pH. Plant, Cell and Environment, 2017, 40, 802-815.	5.7	153
22	Chloride on the Move. Trends in Plant Science, 2017, 22, 236-248.	8.8	152
23	NaClâ€induced changes in cytosolic free Ca²⁺ in <i>Arabidopsis thaliana</i> are heterogeneous and modified by external ionic composition. Plant, Cell and Environment, 2008, 31, 1063-1073.	5.7	140
24	Improved Salinity Tolerance of Rice Through Cell Type-Specific Expression of AtHKT1;1. PLoS ONE, 2010, 5, e12571.	2.5	140
25	Hyperpolarisation-activated calcium currents found only in cells from the elongation zone of Arabidopsis thaliana roots. Plant Journal, 2000, 21, 225-229.	5.7	138
26	Evolution of chloroplast retrograde signaling facilitates green plant adaptation to land. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5015-5020.	7.1	138
27	A chloroplast retrograde signal, 3â€™-phosphoadenosine 5â€™-phosphate, acts as a secondary messenger in abscisic acid signaling in stomatal closure and germination. ELife, 2017, 6, .	6.0	132
28	Calcium storage in plants and the implications for calcium biofortification. Protoplasma, 2010, 247, 215-231.	2.1	117
29	Investigating glutamate receptorâ€like gene coâ€expression in <i>Arabidopsis thaliana</i>. Plant, Cell and Environment, 2008, 31, 861-871.	5.7	110
30	Linking Metabolism to Membrane Signaling: The GABAâ€"Malate Connection. Trends in Plant Science, 2016, 21, 295-301.	8.8	104
31	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
32	Magnesium transporters, MGT2/MRS2â€1 and MGT3/MRS2â€5, are important for magnesium partitioning within <i>Arabidopsis thaliana</i> mesophyll vacuoles. New Phytologist, 2011, 190, 583-594.	7.3	99
33	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
34	Chloride: not simply a â€˜cheap osmoticumâ€™, but a beneficial plant macronutrient. Journal of Experimental Botany, 2017, 68, 3057-3069.	4.8	94
35	GABA signalling modulates stomatal opening to enhance plant water use efficiency and drought resilience. Nature Communications, 2021, 12, 1952.	12.8	92
36	A calmodulinâ€like protein regulates plasmodesmal closure during bacterial immune responses. New Phytologist, 2017, 215, 77-84.	7.3	90

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37	VitiCanopy: A Free Computer App to Estimate Canopy Vigor and Porosity for Grapevine. Sensors, 2016, 16, 585.	3.8	87
38	The Regulation of Anion Loading to the Maize Root Xylem. Plant Physiology, 2005, 137, 819-828.	4.8	86
39	Channel-Like Characteristics of the Low-Affinity Barley Phosphate Transporter PHT1;6 When Expressed in<i>Xenopus</i>Oocytes. Plant Physiology, 2010, 152, 1431-1441.	4.8	82
40	Shoot chloride exclusion and salt tolerance in grapevine is associated with differential ion transporter expression in roots. BMC Plant Biology, 2014, 14, 273.	3.6	78
41	GmSALT3, Which Confers Improved Soybean Salt Tolerance in the Field, Increases Leaf Cl- Exclusion Prior to Na+ Exclusion But Does Not Improve Early Vigor under Salinity. Frontiers in Plant Science, 2016, 7, 1485.	3.6	71
42	Aluminum-Activated Malate Transporters Can Facilitate GABA Transport. Plant Cell, 2018, 30, 1147-1164.	6.6	71
43	SLAH1, a homologue of the slow type anion channel SLAC1, modulates shoot Clâˆ’ accumulation and salt tolerance in <i>Arabidopsis thaliana</i>. Journal of Experimental Botany, 2016, 67, 4495-4505.	4.8	70
44	Functional differences in transport properties of natural <scp>HKT</scp>1;1 variants influence shoot Na⁺ exclusion in grapevine rootstocks. New Phytologist, 2018, 217, 1113-1127.	7.3	66
45	AtNPF2.5 Modulates Chloride (Clâˆ’) Efflux from Roots of Arabidopsis thaliana. Frontiers in Plant Science, 2016, 7, 2013.	3.6	65
46	Mapping of novel salt tolerance QTL in an Excaliburâ€‰Ã—â€‰Kukri doubled haploid wheat population. Theoretical and Applied Genetics, 2018, 131, 2179-2196.	3.6	60
47	Global DNA Methylation Patterns Can Play a Role in Defining Terroir in Grapevine (Vitis vinifera cv.) Tj ETQq1 1 0.784314 rgBT /Overlo	3.6	58
48	The sodium transporter encoded by the <i>HKT1</i>;<i>2</i> gene modulates sodium/potassium homeostasis in tomato shoots under salinity. Plant, Cell and Environment, 2017, 40, 658-671.	5.7	56
49	Grapevine and Arabidopsis cation-chloride cotransporters localise to the Golgi and trans-Golgi network and indirectly influence long-distance ion homeostasis and plant salt tolerance. Plant Physiology, 2015, 169, pp.00499.2015.	4.8	55
50	Ethylene negatively regulates aluminium-induced malate efflux from wheat roots and tobacco cells transformed with TaALMT1. Journal of Experimental Botany, 2014, 65, 2415-2426.	4.8	49
51	Protocol: a fast and simple in situ PCR method for localising gene expression in plant tissue. Plant Methods, 2014, 10, 29.	4.3	45
52	Structural variations in wheat HKT1;5 underpin differences in Na+ transport capacity. Cellular and Molecular Life Sciences, 2018, 75, 1133-1144.	5.4	45
53	Manipulating exudate composition from root apices shapes the microbiome throughout the root system. Plant Physiology, 2021, 187, 2279-2295.	4.8	44
54	Heterodimerization of Arabidopsis calcium/proton exchangers contributes to regulation of guard cell dynamics and plant defense responses. Journal of Experimental Botany, 2017, 68, 4171-4183.	4.8	39

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55	Molecular identification and functional analysis of a maize (Zea mays) DUR3 homolog that transports urea with high affinity. Planta, 2015, 241, 861-874.	3.2	38
56	Cell-specific compartmentation of mineral nutrients is an essential mechanism for optimal plant productivityâ€" another role for<i>TPC1</i>?. Plant Signaling and Behavior, 2011, 6, 1656-1661.	2.4	34
57	Salinity Negatively Affects Pollen Tube Growth and Fruit Set in Grapevines and Is Not Mitigated by Silicon. American Journal of Enology and Viticulture, 2016, 67, 218-228.	1.7	34
58	The emerging role of GABA as a transport regulator and physiological signal. Plant Physiology, 2021, 187, 2005-2016.	4.8	34
59	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
60	Cytosolic GABA inhibits anion transport by wheat ALMT1. New Phytologist, 2020, 225, 671-678.	7.3	27
61	Grapevine salt tolerance. Australian Journal of Grape and Wine Research, 2021, 27, 149-168.	2.1	27
62	MYB77 regulates highâ€affinity potassium uptake by promoting expression of <i>HAK5</i>. New Phytologist, 2021, 232, 176-189.	7.3	26
63	A sterile hydroponic system for characterising root exudates from specific root types and whole-root systems of large crop plants. Plant Methods, 2018, 14, 114.	4.3	25
64	Exploiting natural variation to uncover candidate genes that control element accumulation in Arabidopsis thaliana. New Phytologist, 2012, 193, 859-866.	7.3	24
65	Molecular and electrophysiological characterization of anion transport in <i>Arabidopsis thaliana</i> pollen reveals regulatory roles for <scp>pH</scp>, Ca²⁺ and GABA. New Phytologist, 2019, 223, 1353-1371.	7.3	24
66	Identification of salt tolerance QTL in a wheat RIL mapping population using destructive and non-destructive phenotyping. Functional Plant Biology, 2021, 48, 131.	2.1	22
67	Plant transporters involved in combating boron toxicity: beyond 3D structures. Biochemical Society Transactions, 2020, 48, 1683-1696.	3.4	22
68	Soybean CHXâ€type ion transport protein GmSALT3 confers leaf Na⁺ exclusion via a root derived mechanism, and Cl^{â^’}â€‰exclusion via a shoot derived process. Plant, Cell and Environment, 2021, 44, 856-869.	5.7	21
69	SpaceHort: redesigning plants to support space exploration and on-earth sustainability. Current Opinion in Biotechnology, 2022, 73, 246-252.	6.6	21
70	Barley sodium content is regulated by natural variants of the Na+ transporter HvHKT1;5. Communications Biology, 2020, 3, 258.	4.4	21
71	Simultaneous flux and current measurement from single plant protoplasts reveals a strong link between K+fluxes and current, but no link between Ca2+fluxes and current. Plant Journal, 2006, 46, 134-144.	5.7	20
72	Plant Cation-Chloride Cotransporters (CCC): Evolutionary Origins and Functional Insights. International Journal of Molecular Sciences, 2018, 19, 492.	4.1	19

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73	A single nucleotide substitution in <scp><i>TaHKT1</i></scp>;<scp><i>5â€Đ</i></scp> controls shoot Na⁺ accumulation in bread wheat. Plant, Cell and Environment, 2020, 43, 2158-2171.	5.7	18
74	Role of <scp>TaALMT1 malateâ€GABA</scp> transporter in alkaline <scp>pH</scp> tolerance of wheat. Plant, Cell and Environment, 2020, 43, 2443-2459.	5.7	16
75	Large expert-curated database for benchmarking document similarity detection in biomedical literature search. Database: the Journal of Biological Databases and Curation, 2019, 2019, .	3.0	15
76	Modified Method for Producing Grapevine Plants in Controlled Environments. American Journal of Enology and Viticulture, 2014, 65, 261-267.	1.7	14
77	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
78	Wine Terroir and the Soil Bacteria: An Amplicon Sequencingâ€“Based Assessment of the Barossa Valley and Its Sub-Regions. Frontiers in Microbiology, 2020, 11, 597944.	3.5	13
79	Enhanced reactive oxygen detoxification occurs in saltâ€stressed soybean roots expressing <scp><i>GmSALT3</i></scp>. Physiologia Plantarum, 2022, 174, e13709.	5.2	13
80	Differential fruitset between grapevine cultivars is related to differences in pollen viability and amine concentration in flowers. Australian Journal of Grape and Wine Research, 2016, 22, 149-158.	2.1	12
81	Roles of membrane transporters: connecting the dots from sequence to phenotype. Annals of Botany, 2019, 124, 201-208.	2.9	12
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91	Plant Trans-Golgi Network/Early Endosome pH regulation requires Cation Chloride Cotransporter (CCC1). ELife, 2022, 11, .	6.0	6
92	Transcriptional variation is associated with differences in shoot sodium accumulation in distinct barley varieties. Environmental and Experimental Botany, 2019, 166, 103812.	4.2	5
93	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
94	The case for evidenceâ€based policy to support stressâ€resilient cropping systems. Food and Energy Security, 2017, 6, 5-11.	4.3	4
95	Tissue and regional expression patterns of dicistronic tRNAâ€“mRNA transcripts in grapevine (Vitis) Tj ETQq1 1 0.784314 rgBT /Overlock Research, 2021, 8, 137.	6.3	4
96	Water Transport & Aquaporins in Grapevine. , 2009, , 73-104.		4
97	Selection of the Salt Tolerance Gene GmSALT3 During Six Decades of Soybean Breeding in China. Frontiers in Plant Science, 2021, 12, 794241.	3.6	4
98	Identifying protein subcellular localisation in scientific literature using bidirectional deep recurrent neural network. Scientific Reports, 2021, 11, 1696.	3.3	3
99	Shoot thinning of Semillon in a hot climate did not improve yield and berry and wine quality. Oeno One, 2020, 54, 469-484.	1.4	3
100	Membrane Structure and the Study of Solute Transport Across Plant Membranes. , 0, , 47-74.		2
101	Transcriptomics on Small Samples. Methods in Molecular Biology, 2012, 913, 335-350.	0.9	2
102	Alluminating structure key to stress tolerance. Cell Research, 2022, 32, 5-6.	12.0	1
103	Root-Specific Expression of Vitis vinifera VviNPF2.2 Modulates Shoot Anion Concentration in Transgenic Arabidopsis. Frontiers in Plant Science, 2022, 13, .	3.6	1
104	<i>Corrigendum to</i>: Identification of salt tolerance QTL in a wheat RIL mapping population using destructive and non-destructive phenotyping. Functional Plant Biology, 2022, 49, 672-672.	2.1	1
105	OUP accepted manuscript. Plant Physiology, 2021, , .	4.8	0
106	The Arabidopsis thaliana Glutamate-like Receptor Family (AtGLR). , 0, , 187-204.		0