Mathew Gilliham

List of Publications by Year in Descending Order

106 papers	6,707 citations	43 h-index	81 g-index
132 ext. papers	8,561 ext. citations	7.4 avg, IF	6.19 L-index

#	Paper	IF	Citations
106	Enhanced reactive oxygen detoxification occurs in salt-stressed soybean roots expressing GmSALT3.. *Physiologia Plantarum*, **2022**, e13709	4.6	2
105	Selection of the Salt Tolerance Gene During Six Decades of Soybean Breeding in China. *Frontiers in Plant Science*, **2021**, 12, 794241	6.2	0
104	GABA signalling modulates stomatal opening to enhance plant water use efficiency and drought resilience. *Nature Communications*, **2021**, 12, 1952	17.4	28
103	Grapevine salt tolerance. *Australian Journal of Grape and Wine Research*, **2021**, 27, 149-168	2.4	4
102	Tissue and regional expression patterns of dicistronic tRNA-mRNA transcripts in grapevine (Vitis vinifera) and their evolutionary co-appearance with vasculature in land plants. *Horticulture Research* , **2021**, 8, 137	7.7	0
101	MYB77 regulates high-affinity potassium uptake by promoting expression of HAK5. *New Phytologist*, **2021**, 232, 176-189	9.8	4
100	Soybean CHX-type ion transport protein GmSALT3 confers leaf Na exclusion via a root derived mechanism, and Cl exclusion via a shoot derived process. *Plant, Cell and Environment*, **2021**, 44, 856-869	8.4	7
99	Identification of salt tolerance QTL in a wheat RIL mapping population using destructive and non-destructive phenotyping. *Functional Plant Biology*, **2021**, 48, 131-140	2.7	9
98	Identifying protein subcellular localisation in scientific literature using bidirectional deep recurrent neural network. *Scientific Reports*, **2021**, 11, 1696	4.9	
97	The microbiomes on the roots of wheat (Triticum aestivum L.) and rice (Oryza sativa L.) exhibit significant differences in structure between root types and along root axes. *Functional Plant Biology*, **2021**, 48, 871-888	2.7	3
96	Manipulating exudate composition from root apices shapes the microbiome throughout the root system. *Plant Physiology*, **2021**, 187, 2279-2295	6.6	5
95	The emerging role of GABA as a transport regulator and physiological signal.. *Plant Physiology*, **2021**, 187, 2005-2016	6.6	7
94	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	3.8	1
93	SpaceHort: redesigning plants to support space exploration and on-earth sustainability. *Current Opinion in Biotechnology*, **2021**, 73, 246-252	11.4	2
92	The grapevine NaE sodium exclusion locus encodes sodium transporters with diverse transport properties and localisation. *Journal of Plant Physiology*, **2020**, 246-247, 153113	3.6	5
91	Barley sodium content is regulated by natural variants of the Na transporter HvHKT1;5. *Communications Biology*, **2020**, 3, 258	6.7	12
90	Plant transporters involved in combating boron toxicity: beyond 3D structures. *Biochemical Society Transactions*, **2020**, 48, 1683-1696	5.1	15

89	Cytosolic GABA inhibits anion transport by wheat ALMT1. *New Phytologist*, **2020**, 225, 671-678	9.8	15
88	High affinity Na transport by wheat HKT1;5 is blocked by K. *Plant Direct*, **2020**, 4, e00275	3.3	4
87	A single nucleotide substitution in TaHKT1;5-D controls shoot Na accumulation in bread wheat. *Plant, Cell and Environment*, **2020**, 43, 2158-2171	8.4	11
86	Role of TaALMT1 malate-GABA transporter in alkaline pH tolerance of wheat. *Plant, Cell and Environment*, **2020**, 43, 2443-2459	8.4	4
85	Energy costs of salt tolerance in crop plants. *New Phytologist*, **2020**, 225, 1072-1090	9.8	144
84	Wine Terroir and the Soil Bacteria: An Amplicon Sequencing-Based Assessment of the Barossa Valley and Its Sub-Regions. *Frontiers in Microbiology*, **2020**, 11, 597944	5.7	4
83	Molecular and electrophysiological characterization of anion transport in Arabidopsis thaliana pollen reveals regulatory roles for pH, Ca and GABA. *New Phytologist*, **2019**, 223, 1353-1371	9.8	13
82	Roles of membrane transporters: connecting the dots from sequence to phenotype. *Annals of Botany*, **2019**, 124, 201-208	4.1	7
81	Low-cost cross-taxon enrichment of mitochondrial DNA using in-house synthesised RNA probes. *PLoS ONE*, **2019**, 14, e0209499	3.7	5
80	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	11.5	74
79	Transcriptional variation is associated with differences in shoot sodium accumulation in distinct barley varieties. *Environmental and Experimental Botany*, **2019**, 166, 103812	5.9	2
78	Large expert-curated database for benchmarking document similarity detection in biomedical literature search. *Database: the Journal of Biological Databases and Curation*, **2019**, 2019,	5	4
77	Postveraison Leaf Removal Does Not Consistently Delay Ripening in Semillon and Shiraz in a Hot Australian Climate. *American Journal of Enology and Viticulture*, **2019**, 70, 398-410	2.2	4
76	Aluminum-Activated Malate Transporters Can Facilitate GABA Transport. *Plant Cell*, **2018**, 30, 1147-1164	11.6	45
75	Root cell wall solutions for crop plants in saline soils. *Plant Science*, **2018**, 269, 47-55	5.3	87
74	Analysis of the salt exclusion phenotype in rooted leaves of grapevine (Vitis spp.). *Australian Journal of Grape and Wine Research*, **2018**, 24, 317-326	2.4	6
73	Mapping of novel salt tolerance QTL in an Excalibur Kukri doubled haploid wheat population. *Theoretical and Applied Genetics*, **2018**, 131, 2179-2196	6	39
72	Plant Cation-Chloride Cotransporters (CCC): Evolutionary Origins and Functional Insights. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	13

71	Plants fighting back: to transport or not to transport, this is a structural question. *Current Opinion in Plant Biology*, **2018**, 46, 68-76	9.9	10
70	Structural variations in wheat HKT1;5 underpin differences in Na transport capacity. *Cellular and Molecular Life Sciences*, **2018**, 75, 1133-1144	10.3	28
69	Functional differences in transport properties of natural HKT1;1 variants influence shoot Na exclusion in grapevine rootstocks. *New Phytologist*, **2018**, 217, 1113-1127	9.8	40
68	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	5.8	13
67	Chloride on the Move. *Trends in Plant Science*, **2017**, 22, 236-248	13.1	97
66	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. *Journal of Experimental Botany*, **2017**, 68, 3129-3143	7	102
65	A calmodulin-like protein regulates plasmodesmal closure during bacterial immune responses. *New Phytologist*, **2017**, 215, 77-84	9.8	53
64	Chloride: not simply a 'cheap osmoticum', but a beneficial plant macronutrient. *Journal of Experimental Botany*, **2017**, 68, 3057-3069	7	61
63	The sodium transporter encoded by the HKT1;2 gene modulates sodium/potassium homeostasis in tomato shoots under salinity. *Plant, Cell and Environment*, **2017**, 40, 658-671	8.4	36
62	Translating knowledge about abiotic stress tolerance to breeding programmes. *Plant Journal*, **2017**, 90, 898-917	6.9	97
61	The case for evidence-based policy to support stress-resilient cropping systems. *Food and Energy Security*, **2017**, 6, 5-11	4.1	3
60	Aminobutyric acid (GABA) signalling in plants. *Cellular and Molecular Life Sciences*, **2017**, 74, 1577-1603	10.3	136
59	Non-selective cation channel activity of aquaporin AtPIP2;1 regulated by Ca and pH. *Plant, Cell and Environment*, **2017**, 40, 802-815	8.4	108
58	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	7	25
57	Global DNA Methylation Patterns Can Play a Role in Defining Terroir in Grapevine (cv. Shiraz). *Frontiers in Plant Science*, **2017**, 8, 1860	6.2	28
56	A chloroplast retrograde signal, 3'-phosphoadenosine 5'-phosphate, acts as a secondary messenger in abscisic acid signaling in stomatal closure and germination. *ELife*, **2017**, 6,	8.9	90
55	A Barley Efflux Transporter Operates in a Na+-Dependent Manner, as Revealed by a Multidisciplinary Platform. *Plant Cell*, **2016**, 28, 202-18	11.6	22
54	Identification of a Stelar-Localized Transport Protein That Facilitates Root-to-Shoot Transfer of Chloride in Arabidopsis. *Plant Physiology*, **2016**, 170, 1014-29	6.6	66

53	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	2.2	19
52	Linking Metabolism to Membrane Signaling: The GABA-Malate Connection. *Trends in Plant Science*, **2016**, 21, 295-301	13.1	81
51	Modulates Chloride (Cl) Efflux from Roots of. *Frontiers in Plant Science*, **2016**, 7, 2013	6.2	36
50	VitiCanopy: A Free Computer App to Estimate Canopy Vigor and Porosity for Grapevine. *Sensors*, **2016**, 16,	3.8	46
49	Fruit Calcium: Transport and Physiology. *Frontiers in Plant Science*, **2016**, 7, 569	6.2	153
48	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	6.2	44
47	Tissue tolerance: an essential but elusive trait for salt-tolerant crops. *Functional Plant Biology*, **2016** , 43, 1103-1113	2.7	101
46	SLAH1, a homologue of the slow type anion channel SLAC1, modulates shoot Cl- accumulation and salt tolerance in Arabidopsis thaliana. *Journal of Experimental Botany*, **2016**, 67, 4495-505	7	51
45	The evolutionary origin of CIPK16: A gene involved in enhanced salt tolerance. *Molecular Phylogenetics and Evolution*, **2016**, 100, 135-147	4.1	6
44	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	2.4	12
43	GABA signalling modulates plant growth by directly regulating the activity of plant-specific anion transporters. *Nature Communications*, **2015**, 6, 7879	17.4	192
42	Salinity tolerance of crops - what is the cost?. *New Phytologist*, **2015**, 208, 668-73	9.8	564
41	The Gatekeeper Concept: Cell-Type Specific Molecular Mechanisms of Plant Adaptation to Abiotic Stress **2015**, 83-115		6
40	Grapevine and Arabidopsis Cation-Chloride Cotransporters Localize to the Golgi and Trans-Golgi Network and Indirectly Influence Long-Distance Ion Transport and Plant Salt Tolerance. *Plant Physiology*, **2015**, 169, 2215-29	6.6	45
39	Molecular identification and functional analysis of a maize (Zea mays) DUR3 homolog that transports urea with high affinity. *Planta*, **2015**, 241, 861-74	4.7	25
38	Rapid shoot-to-root signalling regulates root hydraulic conductance via aquaporins. *Plant, Cell and Environment*, **2014**, 37, 520-38	8.4	118
37	The Na(+) transporter, TaHKT1;5-D, limits shoot Na(+) accumulation in bread wheat. *Plant Journal*, **2014**, 80, 516-26	6.9	117
36	Modified Method for Producing Grapevine Plants in Controlled Environments. *American Journal of Enology and Viticulture*, **2014**, 65, 261-267	2.2	13

35	Salinity tolerance in soybean is modulated by natural variation in GmSALT3. *Plant Journal*, **2014**, 80, 937-50	6.9	144
34	Ethylene negatively regulates aluminium-induced malate efflux from wheat roots and tobacco cells transformed with TaALMT1. *Journal of Experimental Botany*, **2014**, 65, 2415-26	7	38
33	Protocol: a fast and simple in situ PCR method for localising gene expression in plant tissue. *Plant Methods*, **2014**, 10, 29	5.8	34
32	Shoot chloride exclusion and salt tolerance in grapevine is associated with differential ion transporter expression in roots. *BMC Plant Biology*, **2014**, 14, 273	5.3	56
31	Protocol: optimising hydroponic growth systems for nutritional and physiological analysis of Arabidopsis thaliana and other plants. *Plant Methods*, **2013**, 9, 4	5.8	115
30	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, 7660-80	6.3	79
29	Wheat grain yield on saline soils is improved by an ancestral Na+ transporter gene. *Nature Biotechnology*, **2012**, 30, 360-4	44.5	515
28	Exploiting natural variation to uncover candidate genes that control element accumulation in Arabidopsis thaliana. *New Phytologist*, **2012**, 193, 859-66	9.8	21
27	Transcriptomics on small samples. *Methods in Molecular Biology*, **2012**, 913, 335-50	1.4	2
26	Glutamate receptor-like genes form Ca2+ channels in pollen tubes and are regulated by pistil D-serine. *Science*, **2011**, 332, 434-7	33.3	300
25	Calcium delivery and storage in plant leaves: exploring the link with water flow. *Journal of Experimental Botany*, **2011**, 62, 2233-50	7	141
24	Magnesium transporters, MGT2/MRS2-1 and MGT3/MRS2-5, are important for magnesium partitioning within Arabidopsis thaliana mesophyll vacuoles. *New Phytologist*, **2011**, 190, 583-94	9.8	75
23	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
22	Cell-specific compartmentation of mineral nutrients is an essential mechanism for optimal plant productivity--another role for TPC1?. *Plant Signaling and Behavior*, **2011**, 6, 1656-61	2.5	28
21	Channel-like characteristics of the low-affinity barley phosphate transporter PHT1;6 when expressed in Xenopus oocytes. *Plant Physiology*, **2010**, 152, 1431-41	6.6	59
20	Comparative physiology of elemental distributions in plants. *Annals of Botany*, **2010**, 105, 1081-102	4.1	241
19	Calcium storage in plants and the implications for calcium biofortification. *Protoplasma*, **2010**, 247, 215-31	3.14	85
18	Improved salinity tolerance of rice through cell type-specific expression of AtHKT1;1. *PLoS ONE*, **2010**, 5, e12571	3.7	106

17	Shoot Na+ exclusion and increased salinity tolerance engineered by cell type-specific alteration of Na+ transport in Arabidopsis. *Plant Cell*, **2009**, 21, 2163-78	11.6	387
16	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. *Plant Physiology*, **2009**, 149, 445-60	6.6	353
15	Water Transport & Aquaporins in Grapevine **2009**, 73-104		4
14	Investigating glutamate receptor-like gene co-expression in Arabidopsis thaliana. *Plant, Cell and Environment*, **2008**, 31, 861-71	8.4	95
13	NaCl-induced changes in cytosolic free Ca2+ in Arabidopsis thaliana are heterogeneous and modified by external ionic composition. *Plant, Cell and Environment*, **2008**, 31, 1063-73	8.4	116
12	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, 134-44	6.9	18
11	The Arabidopsis thaliana Glutamate-like Receptor Family (AtGLR) **2006**, 187-204		9
10	The regulation of anion loading to the maize root xylem. *Plant Physiology*, **2005**, 137, 819-28	6.6	78
9	Hyperpolarisation-activated calcium currents found only in cells from the elongation zone of Arabidopsis thaliana roots. *Plant Journal*, **2000**, 21, 225-9	6.9	127
8	Membrane Structure and the Study of Solute Transport Across Plant Membranes47-74		2
7	A single nucleotide substitution in TaHKT1;5-D controls shoot Na+ accumulation in bread wheat		3
6	Identification of a unique ZIP transporter involved in zinc uptake via the arbuscular mycorrhizal fungal pathway		1
5	Wine terroir and the soil microbiome: an amplicon sequencing‐based assessment of the Barossa Valley and its sub-regions		1
4	Environmental conditions and agronomic practices induce consistent global changes in DNA methylation patterns in grapevine (Vitis vinifera cv Shiraz)		2
3	Soybean CHX protein GmSALT3 confers leaf Na+ exclusion via a root derived mechanism, and Cl exclusion via a shoot derived process		1
2	Split personality of Aluminum Activated Malate Transporter family proteins: facilitation of both GABA and malate transport		1
1	The Arabidopsis thaliana Glutamate-like Receptor Family (AtGLR)187-204		