# Mathew Gilliham

## List of Publications by Citations



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| 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 | Salinity tolerance of crops - what is the cost?. *New Phytologist*, **2015**, 208, 668-73 | 9.8 | 564 |
| 105 | Wheat grain yield on saline soils is improved by an ancestral Na+ transporter gene. *Nature Biotechnology*, **2012**, 30, 360-4 | 44.5 | 515 |
| 104 | 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 |
| 103 | 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 |
| 102 | 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 |
| 101 | Comparative physiology of elemental distributions in plants. *Annals of Botany*, **2010**, 105, 1081-102 | 4.1 | 241 |
| 100 | GABA signalling modulates plant growth by directly regulating the activity of plant-specific anion transporters. *Nature Communications*, **2015**, 6, 7879 | 17.4 | 192 |
| 99 | 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 |
| 98 | Fruit Calcium: Transport and Physiology. *Frontiers in Plant Science*, **2016**, 7, 569 | 6.2 | 153 |
| 97 | Salinity tolerance in soybean is modulated by natural variation in GmSALT3. *Plant Journal*, **2014**, 80, 937-50 | 6.9 | 144 |
| 96 | Energy costs of salt tolerance in crop plants. *New Phytologist*, **2020**, 225, 1072-1090 | 9.8 | 144 |
| 95 | Calcium delivery and storage in plant leaves: exploring the link with water flow. *Journal of Experimental Botany*, **2011**, 62, 2233-50 | 7 | 141 |
| 94 | Aminobutyric acid (GABA) signalling in plants. *Cellular and Molecular Life Sciences*, **2017**, 74, 1577-1603 | 10.3 | 136 |
| 93 | 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 |
| 92 | Rapid shoot-to-root signalling regulates root hydraulic conductance via aquaporins. *Plant, Cell and Environment*, **2014**, 37, 520-38 | 8.4 | 118 |
| 91 | The Na(+) transporter, TaHKT1;5-D, limits shoot Na(+) accumulation in bread wheat. *Plant Journal*, **2014**, 80, 516-26 | 6.9 | 117 |
| 90 | 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 |

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| 89 | Protocol: optimising hydroponic growth systems for nutritional and physiological analysis of Arabidopsis thaliana and other plants. *Plant Methods*, **2013**, 9, 4 | 5.8 | 115 |
| 88 | 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 |
| 87 | Improved salinity tolerance of rice through cell type-specific expression of AtHKT1;1. *PLoS ONE*, **2010**, 5, e12571 | 3.7 | 106 |
| 86 | Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. *Journal of Experimental Botany*, **2017**, 68, 3129-3143 | 7 | 102 |
| 85 | Tissue tolerance: an essential but elusive trait for salt-tolerant crops. *Functional Plant Biology*, **2016** , 43, 1103-1113 | 2.7 | 101 |
| 84 | Chloride on the Move. *Trends in Plant Science*, **2017**, 22, 236-248 | 13.1 | 97 |
| 83 | Translating knowledge about abiotic stress tolerance to breeding programmes. *Plant Journal*, **2017**, 90, 898-917 | 6.9 | 97 |
| 82 | Investigating glutamate receptor-like gene co-expression in Arabidopsis thaliana. *Plant, Cell and Environment*, **2008**, 31, 861-71 | 8.4 | 95 |
| 81 | 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 |
| 80 | Root cell wall solutions for crop plants in saline soils. *Plant Science*, **2018**, 269, 47-55 | 5.3 | 87 |
| 79 | Calcium storage in plants and the implications for calcium biofortification. *Protoplasma*, **2010**, 247, 215-31 | 3.4 | 85 |
| 78 | Linking Metabolism to Membrane Signaling: The GABA-Malate Connection. *Trends in Plant Science*, **2016**, 21, 295-301 | 13.1 | 81 |
| 77 | 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 |
| 76 | The regulation of anion loading to the maize root xylem. *Plant Physiology*, **2005**, 137, 819-28 | 6.6 | 78 |
| 75 | 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 |
| 74 | 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 |
| 73 | 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 |
| 72 | Chloride: not simply a 'cheap osmoticum', but a beneficial plant macronutrient. *Journal of Experimental Botany*, **2017**, 68, 3057-3069 | 7 | 61 |

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| 71 | 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 |
| 70 | 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 |
| 69 | A calmodulin-like protein regulates plasmodesmal closure during bacterial immune responses. *New Phytologist*, **2017**, 215, 77-84 | 9.8 | 53 |
| 68 | 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 |
| 67 | VitiCanopy: A Free Computer App to Estimate Canopy Vigor and Porosity for Grapevine. *Sensors*, **2016**, 16, | 3.8 | 46 |
| 66 | Aluminum-Activated Malate Transporters Can Facilitate GABA Transport. *Plant Cell*, **2018**, 30, 1147-1164 | 11.6 | 45 |
| 65 | 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 |
| 64 | 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 |
| 63 | 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 |
| 62 | Mapping of novel salt tolerance QTL in an Excalibur □Kukri doubled haploid wheat population. *Theoretical and Applied Genetics*, **2018**, 131, 2179-2196 | 6 | 39 |
| 61 | 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 |
| 60 | 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 |
| 59 | Modulates Chloride (Cl) Efflux from Roots of. *Frontiers in Plant Science*, **2016**, 7, 2013 | 6.2 | 36 |
| 58 | Protocol: a fast and simple in situ PCR method for localising gene expression in plant tissue. *Plant Methods*, **2014**, 10, 29 | 5.8 | 34 |
| 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 | 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 |
| 55 | GABA signalling modulates stomatal opening to enhance plant water use efficiency and drought resilience. *Nature Communications*, **2021**, 12, 1952 | 17.4 | 28 |
| 54 | Structural variations in wheat HKT1;5 underpin differences in Na transport capacity. *Cellular and Molecular Life Sciences*, **2018**, 75, 1133-1144 | 10.3 | 28 |

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| 53 | 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 |
| 52 | 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 |
| 51 | 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 |
| 50 | Exploiting natural variation to uncover candidate genes that control element accumulation in Arabidopsis thaliana. *New Phytologist*, **2012**, 193, 859-66 | 9.8 | 21 |
| 49 | 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 |
| 48 | 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 |
| 47 | Plant transporters involved in combating boron toxicity: beyond 3D structures. *Biochemical Society Transactions*, **2020**, 48, 1683-1696 | 5.1 | 15 |
| 46 | Cytosolic GABA inhibits anion transport by wheat ALMT1. *New Phytologist*, **2020**, 225, 671-678 | 9.8 | 15 |
| 45 | 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 |
| 44 | Plant Cation-Chloride Cotransporters (CCC): Evolutionary Origins and Functional Insights. *International Journal of Molecular Sciences*, **2018**, 19, | 6.3 | 13 |
| 43 | Modified Method for Producing Grapevine Plants in Controlled Environments. *American Journal of Enology and Viticulture*, **2014**, 65, 261-267 | 2.2 | 13 |
| 42 | 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 |
| 41 | Barley sodium content is regulated by natural variants of the Na transporter HvHKT1;5. *Communications Biology*, **2020**, 3, 258 | 6.7 | 12 |
| 40 | 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 |
| 39 | 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 |
| 38 | 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 |
| 37 | The Arabidopsis thaliana Glutamate-like Receptor Family (AtGLR) **2006**, 187-204 | | 9 |
| 36 | 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 |

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| 35 | Roles of membrane transporters: connecting the dots from sequence to phenotype. *Annals of Botany*, **2019**, 124, 201-208 | 4.1 | 7 |
| 34 | 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 |
| 33 | The emerging role of GABA as a transport regulator and physiological signal.. *Plant Physiology*, **2021**, 187, 2005-2016 | 6.6 | 7 |
| 32 | 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 |
| 31 | The Gatekeeper Concept: Cell-Type Specific Molecular Mechanisms of Plant Adaptation to Abiotic Stress **2015**, 83-115 | | 6 |
| 30 | The evolutionary origin of CIPK16: A gene involved in enhanced salt tolerance. *Molecular Phylogenetics and Evolution*, **2016**, 100, 135-147 | 4.1 | 6 |
| 29 | Low-cost cross-taxon enrichment of mitochondrial DNA using in-house synthesised RNA probes. *PLoS ONE*, **2019**, 14, e0209499 | 3.7 | 5 |
| 28 | 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 |
| 27 | Manipulating exudate composition from root apices shapes the microbiome throughout the root system. *Plant Physiology*, **2021**, 187, 2279-2295 | 6.6 | 5 |
| 26 | Water Transport & Aquaporins in Grapevine **2009**, 73-104 | | 4 |
| 25 | High affinity Na transport by wheat HKT1;5 is blocked by K. *Plant Direct*, **2020**, 4, e00275 | 3.3 | 4 |
| 24 | Role of TaALMT1 malate-GABA transporter in alkaline pH tolerance of wheat. *Plant, Cell and Environment*, **2020**, 43, 2443-2459 | 8.4 | 4 |
| 23 | Grapevine salt tolerance. *Australian Journal of Grape and Wine Research*, **2021**, 27, 149-168 | 2.4 | 4 |
| 22 | MYB77 regulates high-affinity potassium uptake by promoting expression of HAK5. *New Phytologist*, **2021**, 232, 176-189 | 9.8 | 4 |
| 21 | 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 |
| 20 | 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 |
| 19 | 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 |
| 18 | The case for evidence-based policy to support stress-resilient cropping systems. *Food and Energy Security*, **2017**, 6, 5-11 | 4.1 | 3 |

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| 17 | A single nucleotide substitution in TaHKT1;5-D controls shoot Na+ accumulation in bread wheat | | 3 |
| 16 | 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 |
| 15 | Transcriptional variation is associated with differences in shoot sodium accumulation in distinct barley varieties. *Environmental and Experimental Botany*, **2019**, 166, 103812 | 5.9 | 2 |
| 14 | Membrane Structure and the Study of Solute Transport Across Plant Membranes47-74 | | 2 |
| 13 | Transcriptomics on small samples. *Methods in Molecular Biology*, **2012**, 913, 335-50 | 1.4 | 2 |
| 12 | Environmental conditions and agronomic practices induce consistent global changes in DNA methylation patterns in grapevine (Vitis vinifera cv Shiraz) | | 2 |
| 11 | SpaceHort: redesigning plants to support space exploration and on-earth sustainability. *Current Opinion in Biotechnology*, **2021**, 73, 246-252 | 11.4 | 2 |
| 10 | Enhanced reactive oxygen detoxification occurs in salt-stressed soybean roots expressing GmSALT3.. *Physiologia Plantarum*, **2022**, e13709 | 4.6 | 2 |
| 9 | Identification of a unique ZIP transporter involved in zinc uptake via the arbuscular mycorrhizal fungal pathway | | 1 |
| 8 | Wine terroir and the soil microbiome: an amplicon sequencing‐based assessment of the Barossa Valley and its sub-regions | | 1 |
| 7 | Soybean CHX protein GmSALT3 confers leaf Na+ exclusion via a root derived mechanism, and Cl exclusion via a shoot derived process | | 1 |
| 6 | Split personality of Aluminum Activated Malate Transporter family proteins: facilitation of both GABA and malate transport | | 1 |
| 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 | 3.8 | 1 |
| 4 | Selection of the Salt Tolerance Gene During Six Decades of Soybean Breeding in China. *Frontiers in Plant Science*, **2021**, 12, 794241 | 6.2 | 0 |
| 3 | 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 |
| 2 | Identifying protein subcellular localisation in scientific literature using bidirectional deep recurrent neural network. *Scientific Reports*, **2021**, 11, 1696 | 4.9 | |
| 1 | The Arabidopsis thaliana Glutamate-like Receptor Family (AtGLR)187-204 | | |