Miguel A PiÃ±eros

List of Publications by Year
in descending order

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56 papers	7,658 citations	117625 34 h-index	168389 53 g-index
61 all docs	61 docs citations	61 times ranked	5807 citing authors

#	Article	IF	Citations
1	HOW DO CROP PLANTS TOLERATE ACID SOILS? MECHANISMS OF ALUMINUM TOLERANCE AND PHOSPHOROUS EFFICIENCY. Annual Review of Plant Biology, 2004, 55, 459-493.	18.7	1,460
2	Plant Adaptation to Acid Soils: The Molecular Basis for Crop Aluminum Resistance. Annual Review of Plant Biology, 2015, 66, 571-598.	18.7	705
3	A gene in the multidrug and toxic compound extrusion (MATE) family confers aluminum tolerance in sorghum. Nature Genetics, 2007, 39, 1156-1161.	21.4	665
4	The Physiology, Genetics and Molecular Biology of Plant Aluminum Resistance and Toxicity. Plant and Soil, 2005, 274, 175-195.	3.7	597
5	AtALMT1, which encodes a malate transporter, is identified as one of several genes critical for aluminum tolerance in Arabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9738-9743.	7.1	509
6	Two functionally distinct members of the MATE (multi-drug and toxic compound extrusion) family of transporters potentially underlie two major aluminum tolerance QTLs in maize. Plant Journal, 2010, 61, 728-740.	5.7	266
7	Aluminum tolerance in maize is associated with higher<i>MATE1</i>gene copy number. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5241-5246.	7.1	265
8	OPT3 Is a Phloem-Specific Iron Transporter That Is Essential for Systemic Iron Signaling and Redistribution of Iron and Cadmium in<i>Arabidopsis</i>Â Â. Plant Cell, 2014, 26, 2249-2264.	6.6	215
9	Low pH, Aluminum, and Phosphorus Coordinately Regulate Malate Exudation through <i>GmALMT1</i> to Improve Soybean Adaptation to Acid Soils Â Â. Plant Physiology, 2013, 161, 1347-1361.	4.8	210
10	The Physiology and Biophysics of an Aluminum Tolerance Mechanism Based on Root Citrate Exudation in Maize. Plant Physiology, 2002, 129, 1194-1206.	4.8	186
11	Characterization of <i>AtALMT1</i> Expression in Aluminum-Inducible Malate Release and Its Role for Rhizotoxic Stress Tolerance in Arabidopsis. Plant Physiology, 2007, 145, 843-852.	4.8	184
12	A Patch-Clamp Study on the Physiology of Aluminum Toxicity and Aluminum Tolerance in Maize. Identification and Characterization of Al3+-Induced Anion Channels. Plant Physiology, 2001, 125, 292-305.	4.8	179
13	The role of aluminum sensing and signaling in plant aluminum resistance. Journal of Integrative Plant Biology, 2014, 56, 221-230.	8.5	153
14	Aluminum Resistance in Maize Cannot Be Solely Explained by Root Organic Acid Exudation. A Comparative Physiological Study. Plant Physiology, 2005, 137, 231-241.	4.8	146
15	Phosphate transporters <scp><scp>OsPHT1</scp></scp>;9 and <scp><scp>OsPHT1</scp></scp>;10 are involved in phosphate uptake in rice. Plant, Cell and Environment, 2014, 37, 1159-1170.	5.7	135
16	An Arabidopsis ABC Transporter Mediates Phosphate Deficiency-Induced Remodeling of Root Architecture by Modulating Iron Homeostasis in Roots. Molecular Plant, 2017, 10, 244-259.	8.3	133
17	Characterization of a voltage-dependent Ca2+-selective channel from wheat roots. Planta, 1995, 195, 478.	3.2	110
18	Novel Properties of the Wheat Aluminum Tolerance Organic Acid Transporter (TaALMT1) Revealed by Electrophysiological Characterization in <i>Xenopus</i> Oocytes: Functional and Structural Implications. Plant Physiology, 2008, 147, 2131-2146.	4.8	99

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19	The ALMT Family of Organic Acid Transporters in Plants and Their Involvement in Detoxification and Nutrient Security. Frontiers in Plant Science, 2016, 7, 1488.	3.6	98
20	Not all ALMT1â€type transporters mediate aluminumâ€activated organic acid responses: the case of <i>ZmALMT1 â€“</i> an anionâ€selective transporter. Plant Journal, 2008, 53, 352-367.	5.7	97
21	Plant Cd 2+ and Zn 2+ status effects on root and shoot heavy metal accumulation in Thlaspi caerulescens. New Phytologist, 2007, 175, 51-58.	7.3	90
22	A <i>de novo</i> synthesis citrate transporter, <i>Vigna umbellata</i> multidrug and toxic compound extrusion, implicates in Alâ€activated citrate efflux in rice bean (<i>Vigna umbellata</i>) root apex. Plant, Cell and Environment, 2011, 34, 2138-2148.	5.7	84
23	Maize ZmALMT2 is a root anion transporter that mediates constitutive root malate efflux. Plant, Cell and Environment, 2012, 35, 1185-1200.	5.7	74
24	Cryo-EM structure of OSCA1.2 from <i>Oryza sativa</i> elucidates the mechanical basis of potential membrane hyperosmolality gating. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14309-14318.	7.1	71
25	Mechanisms of metal resistance in plants: aluminum and heavy metals. Plant and Soil, 2002, 247, 109-119.	3.7	66
26	The physiology, genetics and molecular biology of plant aluminum resistance and toxicity. Plant Ecophysiology, 2005, , 175-195.	1.5	65
27	The Raf-like kinase ILK1 and the high affinity K+ transporter HAK5 are required for Innate Immunity and Abiotic Stress Response. Plant Physiology, 2016, 171, pp.00035.2016.	4.8	59
28	Phosphorylation at S384 regulates the activity of the TaALMT1 malate transporter that underlies aluminum resistance in wheat. Plant Journal, 2009, 60, 411-423.	5.7	54
29	Functional, structural and phylogenetic analysis of domains underlying the <scp>A</scp>l sensitivity of the aluminumâ€activated malate/anion transporter, <scp>T</scp>a<scp>ALMT</scp>1. Plant Journal, 2013, 76, 766-780.	5.7	50
30	Lossâ€ofâ€function mutation of the calcium sensor <scp>CBL</scp>1 increases aluminum sensitivity in <i>Arabidopsis</i>. New Phytologist, 2017, 214, 830-841.	7.3	50
31	A Sugar Transporter Takes Up both Hexose and Sucrose for Sorbitol-Modulated In Vitro Pollen Tube Growth in Apple. Plant Cell, 2020, 32, 449-469.	6.6	49
32	Two citrate transporters coordinately regulate citrate secretion from rice bean root tip under aluminum stress. Plant, Cell and Environment, 2018, 41, 809-822.	5.7	45
33	Evolving technologies for growing, imaging and analyzing 3D root system architecture of crop plants. Journal of Integrative Plant Biology, 2016, 58, 230-241.	8.5	43
34	Apple ALMT9 Requires a Conserved C-Terminal Domain for Malate Transport Underlying Fruit Acidity. Plant Physiology, 2020, 182, 992-1006.	4.8	41
35	Plant HKT Channels: An Updated View on Structure, Function and Gene Regulation. International Journal of Molecular Sciences, 2021, 22, 1892.	4.1	38
36	Incomplete transfer of accessory loci influencing <i><scp>S</scp>b<scp>MATE</scp></i> expression underlies genetic background effects for aluminum tolerance in sorghum. Plant Journal, 2013, 73, 276-288.	5.7	31

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37	Emerging Pleiotropic Mechanisms Underlying Aluminum Resistance and Phosphorus Acquisition on Acidic Soils. Frontiers in Plant Science, 2018, 9, 1420.	3.6	30
38	Characterization of the High-Affinity Verapamil Binding Site in a Plant Plasma Membrane Ca 2+ -selective Channel. Journal of Membrane Biology, 1997, 157, 139-145.	2.1	29
39	<i><scp>ALUMINUM RESISTANCE TRANSCRIPTION FACTOR</scp> 1</i> (<i><scp>ART</scp>1</i>) contributes to natural variation in aluminum resistance in diverse genetic backgrounds of rice (<i>O.) Tj ETQq1 1 0.784314 rg BT /Overlo	1.9	23
40	Indoleâ€3â€glycerolphosphate synthase, a branchpoint for the biosynthesis of tryptophan, indole, and benzoxazinoids in maize. Plant Journal, 2021, 106, 245-257.	5.7	29
41	Cation Permeability and Selectivity of a Root Plasma Membrane Calcium Channel. Journal of Membrane Biology, 2000, 174, 71-83.	2.1	28
42	Signal coordination before, during and after stomatal closure in response to drought stress. New Phytologist, 2019, 224, 675-688.	7.3	27
43	Selectivity of Liquid Membrane Cadmium Microelectrodes Based on the IonophoreN,N,Nâ€²,Nâ€²-Tetrabutyl-3,6-dioxaoctanedithioamide. Electroanalysis, 1998, 10, 937-941.	2.9	26
44	YSL3-mediated copper distribution is required for fertility, seed size and protein accumulation in <i>Brachypodium</i>. Plant Physiology, 2021, 186, 655-676.	4.8	25
45	Functional characterization and discovery of modulators of SbMATE, the agronomically important aluminium tolerance transporter from Sorghum bicolor. Scientific Reports, 2017, 7, 17996.	3.3	23
46	Differences in Whole-Cell and Single-Channel Ion Currents across the Plasma Membrane of Mesophyll Cells from Two Closely RelatedThlaspi Species. Plant Physiology, 2003, 131, 583-594.	4.8	21
47	Cell-Free Synthesis of a Transmembrane Mechanosensitive Channel Protein into a Hybrid-Supported Lipid Bilayer. ACS Applied Bio Materials, 2021, 4, 3101-3112.	4.6	16
48	Physiological and molecular analysis of aluminum tolerance in selected Kenyan maize lines. Plant and Soil, 2014, 377, 357-367.	3.7	14
49	An extracellular cation coordination site influences ion conduction of OsHKT2;2. BMC Plant Biology, 2019, 19, 316.	3.6	11
50	Low Additive Genetic Variation in a Trait Under Selection in Domesticated Rice. G3: Genes, Genomes, Genetics, 2020, 10, 2435-2443.	1.8	9
51	Redefining â€˜stress resistance genesâ€™, and why it matters. Journal of Experimental Botany, 2016, 67, 5588-5591.	4.8	7
52	Calcium Inhibits Dihydropyridine-Stimulated Increases in Opening and Unitary Conductance of a Plant Ca2+ Channel. Journal of Membrane Biology, 2011, 240, 13-20.	2.1	3
53	Grain mineral nutrient profiling and iron bioavailability of an ancient crop tef (Eragrostis tef). Australian Journal of Crop Science, 2021, , 1314-1324.	0.3	3
54	Maize Al Tolerance. , 2009, , 367-380.		2

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55	Structure Function Studies of a Plant Non Selective Cation Channel Involved in Drough Tolerance. Biophysical Journal, 2019, 116, 399a.	0.5	0
56	Elucidation of Structural Domains Underlying Substrate Recognition in Plant MATE Transporters. Biophysical Journal, 2020, 118, 442a.	0.5	0