

# Miguel A Piñeros

## List of Publications by Year in descending order

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56  
papers

7,658  
citations

117453

34  
h-index

168136

53  
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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. <i>Annual Review of Plant Biology</i> , 2004, 55, 459-493.	8.6	1,460
2	Plant Adaptation to Acid Soils: The Molecular Basis for Crop Aluminum Resistance. <i>Annual Review of Plant Biology</i> , 2015, 66, 571-598.	8.6	705
3	A gene in the multidrug and toxic compound extrusion (MATE) family confers aluminum tolerance in sorghum. <i>Nature Genetics</i> , 2007, 39, 1156-1161.	9.4	665
4	The Physiology, Genetics and Molecular Biology of Plant Aluminum Resistance and Toxicity. <i>Plant and Soil</i> , 2005, 274, 175-195.	1.8	597
5	AtALMT1, which encodes a malate transporter, is identified as one of several genes critical for aluminum tolerance in Arabidopsis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 9738-9743.	3.3	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. <i>Plant Journal</i> , 2010, 61, 728-740.	2.8	266
7	Aluminum tolerance in maize is associated with higher <i>MATE1</i> gene copy number. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 5241-5246.	3.3	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> . <i>Plant Cell</i> , 2014, 26, 2249-2264.	3.1	215
9	Low pH, Aluminum, and Phosphorus Coordinately Regulate Malate Exudation through <i>GmALMT1</i> to Improve Soybean Adaptation to Acid Soils. <i>Plant Physiology</i> , 2013, 161, 1347-1361.	2.3	210
10	The Physiology and Biophysics of an Aluminum Tolerance Mechanism Based on Root Citrate Exudation in Maize. <i>Plant Physiology</i> , 2002, 129, 1194-1206.	2.3	186
11	Characterization of <i>AtALMT1</i> Expression in Aluminum-Inducible Malate Release and Its Role for Rhizotoxic Stress Tolerance in Arabidopsis. <i>Plant Physiology</i> , 2007, 145, 843-852.	2.3	184
12	A Patch-Clamp Study on the Physiology of Aluminum Toxicity and Aluminum Tolerance in Maize. Identification and Characterization of Al <sup>3+</sup> -Induced Anion Channels. <i>Plant Physiology</i> , 2001, 125, 292-305.	2.3	179
13	The role of aluminum sensing and signaling in plant aluminum resistance. <i>Journal of Integrative Plant Biology</i> , 2014, 56, 221-230.	4.1	153
14	Aluminum Resistance in Maize Cannot Be Solely Explained by Root Organic Acid Exudation. A Comparative Physiological Study. <i>Plant Physiology</i> , 2005, 137, 231-241.	2.3	146
15	Phosphate transporters <i>OsPHT1</i> ;9 and <i>OsPHT1</i> ;10 are involved in phosphate uptake in rice. <i>Plant, Cell and Environment</i> , 2014, 37, 1159-1170.	2.8	135
16	An Arabidopsis ABC Transporter Mediates Phosphate Deficiency-Induced Remodeling of Root Architecture by Modulating Iron Homeostasis in Roots. <i>Molecular Plant</i> , 2017, 10, 244-259.	3.9	133
17	Characterization of a voltage-dependent Ca <sup>2+</sup> -selective channel from wheat roots. <i>Planta</i> , 1995, 195, 478.	1.6	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. <i>Plant Physiology</i> , 2008, 147, 2131-2146.	2.3	99

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19	The ALMT Family of Organic Acid Transporters in Plants and Their Involvement in Detoxification and Nutrient Security. <i>Frontiers in Plant Science</i> , 2016, 7, 1488.	1.7	98
20	Not all ALMT1-like transporters mediate aluminum-activated organic acid responses: the case of <i>ZmALMT1</i> an anion-selective transporter. <i>Plant Journal</i> , 2008, 53, 352-367.	2.8	97
21	Plant Cd <sup>2+</sup> and Zn <sup>2+</sup> status effects on root and shoot heavy metal accumulation in <i>Thlaspi caerulescens</i> . <i>New Phytologist</i> , 2007, 175, 51-58.	3.5	90
22	A <i>de novo</i> synthesis citrate transporter, <i>Vigna umbellata</i> multidrug and toxic compound extrusion, implicates in Al-activated citrate efflux in rice bean ( <i>Vigna umbellata</i> ) root apex. <i>Plant, Cell and Environment</i> , 2011, 34, 2138-2148.	2.8	84
23	Maize <i>ZmALMT2</i> is a root anion transporter that mediates constitutive root malate efflux. <i>Plant, Cell and Environment</i> , 2012, 35, 1185-1200.	2.8	74
24	Cryo-EM structure of OSCA1.2 from <i>Oryza sativa</i> elucidates the mechanical basis of potential membrane hyperosmolality gating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14309-14318.	3.3	71
25	Mechanisms of metal resistance in plants: aluminum and heavy metals. <i>Plant and Soil</i> , 2002, 247, 109-119.	1.8	66
26	The physiology, genetics and molecular biology of plant aluminum resistance and toxicity. <i>Plant Ecophysiology</i> , 2005, , 175-195.	1.5	65
27	The Raf-like kinase ILK1 and the high affinity K <sup>+</sup> transporter HAK5 are required for Innate Immunity and Abiotic Stress Response. <i>Plant Physiology</i> , 2016, 171, pp.00035.2016.	2.3	59
28	Phosphorylation at S384 regulates the activity of the <i>TaALMT1</i> malate transporter that underlies aluminum resistance in wheat. <i>Plant Journal</i> , 2009, 60, 411-423.	2.8	54
29	Functional, structural and phylogenetic analysis of domains underlying the <i>A</i> sensitivity of the aluminum-activated malate/anion transporter, <i>TaALMT1</i> . <i>Plant Journal</i> , 2013, 76, 766-780.	2.8	50
30	Loss of function mutation of the calcium sensor <i>CBL1</i> increases aluminum sensitivity in <i>Arabidopsis</i> . <i>New Phytologist</i> , 2017, 214, 830-841.	3.5	50
31	A Sugar Transporter Takes Up both Hexose and Sucrose for Sorbitol-Modulated In Vitro Pollen Tube Growth in Apple. <i>Plant Cell</i> , 2020, 32, 449-469.	3.1	49
32	Two citrate transporters coordinately regulate citrate secretion from rice bean root tip under aluminum stress. <i>Plant, Cell and Environment</i> , 2018, 41, 809-822.	2.8	45
33	Evolving technologies for growing, imaging and analyzing 3D root system architecture of crop plants. <i>Journal of Integrative Plant Biology</i> , 2016, 58, 230-241.	4.1	43
34	Apple <i>ALMT9</i> Requires a Conserved C-Terminal Domain for Malate Transport Underlying Fruit Acidity. <i>Plant Physiology</i> , 2020, 182, 992-1006.	2.3	41
35	Plant HKT Channels: An Updated View on Structure, Function and Gene Regulation. <i>International Journal of Molecular Sciences</i> , 2021, 22, 1892.	1.8	38
36	Incomplete transfer of accessory loci influencing <i>SbMATE</i> expression underlies genetic background effects for aluminum tolerance in sorghum. <i>Plant Journal</i> , 2013, 73, 276-288.	2.8	31

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37	Emerging Pleiotropic Mechanisms Underlying Aluminum Resistance and Phosphorus Acquisition on Acidic Soils. <i>Frontiers in Plant Science</i> , 2018, 9, 1420.	1.7	30
38	Characterization of the High-Affinity Verapamil Binding Site in a Plant Plasma Membrane Ca <sup>2+</sup> -selective Channel. <i>Journal of Membrane Biology</i> , 1997, 157, 139-145.	1.0	29
39	<i>ALUMINUM RESISTANCE TRANSCRIPTION FACTOR 1</i> contributes to natural variation in aluminum resistance in diverse genetic backgrounds of rice ( <i>O. Tj ETQq1 1 07.84314 rgBT /Over</i>	1.0	29
40	Indole-3- $\beta$ -glucosylglycerolphosphate synthase, a branchpoint for the biosynthesis of tryptophan, indole, and benzoxazinoids in maize. <i>Plant Journal</i> , 2021, 106, 245-257.	2.8	29
41	Cation Permeability and Selectivity of a Root Plasma Membrane Calcium Channel. <i>Journal of Membrane Biology</i> , 2000, 174, 71-83.	1.0	28
42	Signal coordination before, during and after stomatal closure in response to drought stress. <i>New Phytologist</i> , 2019, 224, 675-688.	3.5	27
43	Selectivity of Liquid Membrane Cadmium Microelectrodes Based on the Ionophore N,N,N',N'-Tetrabutyl-3,6-dioxaoctanedithioamide. <i>Electroanalysis</i> , 1998, 10, 937-941.	1.5	26
44	YSL3-mediated copper distribution is required for fertility, seed size and protein accumulation in <i>Brachypodium</i> . <i>Plant Physiology</i> , 2021, 186, 655-676.	2.3	25
45	Functional characterization and discovery of modulators of SbMATE, the agronomically important aluminium tolerance transporter from <i>Sorghum bicolor</i> . <i>Scientific Reports</i> , 2017, 7, 17996.	1.6	23
46	Differences in Whole-Cell and Single-Channel Ion Currents across the Plasma Membrane of Mesophyll Cells from Two Closely Related <i>Thlaspi</i> Species. <i>Plant Physiology</i> , 2003, 131, 583-594.	2.3	21
47	Cell-Free Synthesis of a Transmembrane Mechanosensitive Channel Protein into a Hybrid-Supported Lipid Bilayer. <i>ACS Applied Bio Materials</i> , 2021, 4, 3101-3112.	2.3	16
48	Physiological and molecular analysis of aluminum tolerance in selected Kenyan maize lines. <i>Plant and Soil</i> , 2014, 377, 357-367.	1.8	14
49	An extracellular cation coordination site influences ion conduction of OsHKT2;2. <i>BMC Plant Biology</i> , 2019, 19, 316.	1.6	11
50	Low Additive Genetic Variation in a Trait Under Selection in Domesticated Rice. <i>G3: Genes, Genomes, Genetics</i> , 2020, 10, 2435-2443.	0.8	9
51	Redefining "stress resistance genes"™, and why it matters. <i>Journal of Experimental Botany</i> , 2016, 67, 5588-5591.	2.4	7
52	Calcium Inhibits Dihydropyridine-Stimulated Increases in Opening and Unitary Conductance of a Plant Ca <sup>2+</sup> Channel. <i>Journal of Membrane Biology</i> , 2011, 240, 13-20.	1.0	3
53	Grain mineral nutrient profiling and iron bioavailability of an ancient crop tef ( <i>Eragrostis tef</i> ). <i>Australian Journal of Crop Science</i> , 2021, , 1314-1324.	0.1	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.	0.2	0
56	Elucidation of Structural Domains Underlying Substrate Recognition in Plant MATE Transporters. Biophysical Journal, 2020, 118, 442a.	0.2	0