Ricardo Aroca

List of Publications by Year
in descending order

93 papers	9,159 citations	41258 49 h-index	49773 87 g-index
95 all docs	95 docs citations	95 times ranked	6467 citing authors

#	Article	IF	Citations
1	Salinity stress alleviation using arbuscular mycorrhizal fungi. A review. Agronomy for Sustainable Development, 2012, 32, 181-200.	2.2	521
2	Regulation of root water uptake under abiotic stress conditions. Journal of Experimental Botany, 2012, 63, 43-57.	2.4	487
3	Regulation by arbuscular mycorrhizae of the integrated physiological response to salinity in plants: new challenges in physiological and molecular studies. Journal of Experimental Botany, 2012, 63, 4033-4044.	2.4	435
4	How does arbuscular mycorrhizal symbiosis regulate root hydraulic properties and plasma membrane aquaporins in Phaseolus vulgaris under drought, cold or salinity stresses?. New Phytologist, 2007, 173, 808-816.	3.5	382
5	Plant growth-promoting rhizobacteria act as biostimulants in horticulture. Scientia Horticulturae, 2015, 196, 124-134.	1.7	321
6	Arbuscular mycorrhizal symbiosis induces strigolactone biosynthesis under drought and improves drought tolerance in lettuce and tomato. Plant, Cell and Environment, 2016, 39, 441-452.	2.8	321
7	Arbuscular mycorrhizal symbiosis influences strigolactone production under salinity and alleviates salt stress in lettuce plants. Journal of Plant Physiology, 2013, 170, 47-55.	1.6	299
8	Influence of Salinity on the In Vitro Development of Glomus intraradices and on the In Vivo Physiological and Molecular Responses of Mycorrhizal Lettuce Plants. Microbial Ecology, 2008, 55, 45-53.	1.4	298
9	The arbuscular mycorrhizal symbiosis enhances the photosynthetic efficiency and the antioxidative response of rice plants subjected to drought stress. Journal of Plant Physiology, 2010, 167, 862-869.	1.6	247
10	The Role of Aquaporins and Membrane Damage in Chilling and Hydrogen Peroxide Induced Changes in the Hydraulic Conductance of Maize Roots. Plant Physiology, 2005, 137, 341-353.	2.3	230
11	Regulation of plasma membrane aquaporins by inoculation with a Bacillus megaterium strain in maize (Zea mays L.) plants under unstressed and salt-stressed conditions. Planta, 2010, 232, 533-543.	1.6	224
12	Arbuscular mycorrhizal symbiosis increases relative apoplastic water flow in roots of the host plant under both well-watered and drought stress conditions. Annals of Botany, 2012, 109, 1009-1017.	1.4	220
13	PIP Aquaporin Gene Expression in Arbuscular Mycorrhizal GlycineÂmax and Lactuca Âsativa Plants in Relation to Drought Stress Tolerance. Plant Molecular Biology, 2006, 60, 389-404.	2.0	212
14	New Insights into the Regulation of Aquaporins by the Arbuscular Mycorrhizal Symbiosis in Maize Plants Under Drought Stress and Possible Implications for Plant Performance. Molecular Plant-Microbe Interactions, 2014, 27, 349-363.	1.4	206
15	Mycorrhizal and non-mycorrhizal Lactuca sativa plants exhibit contrasting responses to exogenous ABA during drought stress and recovery. Journal of Experimental Botany, 2008, 59, 2029-2041.	2.4	200
16	Drought, Abscisic Acid and Transpiration Rate Effects on the Regulation of PIP Aquaporin Gene Expression and Abundance in Phaseolus vulgaris Plants. Annals of Botany, 2006, 98, 1301-1310.	1.4	199
17	Arbuscular mycorrhizal fungi native from a <scp>M</scp>editerranean saline area enhance maize tolerance to salinity through improved ion homeostasis. Plant, Cell and Environment, 2013, 36, 1771-1782.	2.8	195
18	Azospirillum and arbuscular mycorrhizal colonization enhance rice growth and physiological traits under well-watered and drought conditions. Journal of Plant Physiology, 2011, 168, 1031-1037.	1.6	181

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19	Native arbuscular mycorrhizal fungi isolated from a saline habitat improved maize antioxidant systems and plant tolerance to salinity. Plant Science, 2013, 201-202, 42-51.	1.7	155
20	Regulation of cation transporter genes by the arbuscular mycorrhizal symbiosis in rice plants subjected to salinity suggests improved salt tolerance due to reduced Na+ root-to-shoot distribution. Mycorrhiza, 2016, 26, 673-684.	1.3	152
21	Arbuscular mycorrhizal symbiosis ameliorates the optimum quantum yield of photosystem II and reduces non-photochemical quenching in rice plants subjected to salt stress. Journal of Plant Physiology, 2015, 185, 75-83.	1.6	151
22	Enhanced Drought Stress Tolerance by the Arbuscular Mycorrhizal Symbiosis in a Drought-Sensitive Maize Cultivar Is Related to a Broader and Differential Regulation of Host Plant Aquaporins than in a Drought-Tolerant Cultivar. Frontiers in Plant Science, 2017, 8, 1056.	1.7	138
23	Involvement of plant endogenous ABA in Bacillus megaterium PGPR activity in tomato plants. BMC Plant Biology, 2014, 14, 36.	1.6	133
24	The Electron Partitioning between the Cytochrome and Alternative Respiratory Pathways during Chilling Recovery in Two Cultivars of Maize Differing in Chilling Sensitivity. Plant Physiology, 2000, 122, 199-204.	2.3	122
25	Involvement of abscisic acid in leaf and root of maize (Zea mays L.) in avoiding chilling-induced water stress. Plant Science, 2003, 165, 671-679.	1.7	117
26	Different root low temperature response of two maize genotypes differing in chilling sensitivity. Plant Physiology and Biochemistry, 2001, 39, 1067-1073.	2.8	113
27	Arbuscular mycorrhiza effects on plant performance under osmotic stress. Mycorrhiza, 2017, 27, 639-657.	1.3	113
28	Drought enhances maize chilling tolerance. II. Photosynthetic traits and protective mechanisms against oxidative stress. Physiologia Plantarum, 2003, 117, 540-549.	2.6	112
29	Plant Responses to Drought Stress and Exogenous ABA Application are Modulated Differently by Mycorrhization in Tomato and an ABA-deficient Mutant (Sitiens). Microbial Ecology, 2008, 56, 704-719.	1.4	111
30	Metabolic transition in mycorrhizal tomato roots. Frontiers in Microbiology, 2015, 6, 598.	1.5	111
31	Expression Analysis of the First Arbuscular Mycorrhizal Fungi Aquaporin Described Reveals Concerted Gene Expression Between Salt-Stressed and Nonstressed Mycelium. Molecular Plant-Microbe Interactions, 2009, 22, 1169-1178.	1.4	105
32	Exploring the use of recombinant inbred lines in combination with beneficial microbial inoculants (AM fungus and PGPR) to improve drought stress tolerance in tomato. Environmental and Experimental Botany, 2016, 131, 47-57.	2.0	104
33	Exogenous ABA accentuates the differences in root hydraulic properties between mycorrhizal and non mycorrhizal maize plants through regulation of PIP aquaporins. Plant Molecular Biology, 2009, 70, 565-579.	2.0	95
34	Photosynthetic characteristics and protective mechanisms against oxidative stress during chilling and subsequent recovery in two maize varieties differing in chilling sensitivity. Plant Science, 2001, 161, 719-726.	1.7	92
35	Localized and nonâ€localized effects of arbuscular mycorrhizal symbiosis on accumulation of osmolytes and aquaporins and on antioxidant systems in maize plants subjected to total or partial root drying. Plant, Cell and Environment, 2015, 38, 1613-1627.	2.8	91
36	Does the enhanced tolerance of arbuscular mycorrhizal plants to water deficit involve modulation of droughtâ€induced plant genes?. New Phytologist, 2006, 171, 693-698.	3.5	89

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37	Enhancement of root hydraulic conductivity by methyl jasmonate and the role of calcium and abscisic acid in this process. Plant, Cell and Environment, 2014, 37, 995-1008.	2.8	88
38	Arbuscular mycorrhizal symbiosis and methyl jasmonate avoid the inhibition of root hydraulic conductivity caused by drought. Mycorrhiza, 2016, 26, 111-122.	1.3	86
39	Differential Effects of a Bacillus megaterium Strain on Lactuca sativa Plant Growth Depending on the Origin of the Arbuscular Mycorrhizal Fungus Coinoculated: Physiologic and Biochemical Traits. Journal of Plant Growth Regulation, 2008, 27, 10-18.	2.8	75
40	The arbuscular mycorrhizal symbiosis regulates aquaporins activity and improves root cell water permeability in maize plants subjected to water stress. Plant, Cell and Environment, 2019, 42, 2274-2290.	2.8	69
41	Hydrogen peroxide effects on root hydraulic properties and plasma membrane aquaporin regulation in Phaseolus vulgaris. Plant Molecular Biology, 2009, 70, 647-661.	2.0	68
42	Interactions between Glomus species and Rhizobium strains affect the nutritional physiology of drought-stressed legume hosts. Journal of Plant Physiology, 2010, 167, 614-619.	1.6	66
43	A native Glomus intraradices strain from a Mediterranean saline area exhibits salt tolerance and enhanced symbiotic efficiency with maize plants under salt stress conditions. Plant and Soil, 2013, 366, 333-349.	1.8	63
44	The Symbiosis with the Arbuscular Mycorrhizal Fungus Rhizophagus irregularis Drives Root Water Transport in Flooded Tomato Plants. Plant and Cell Physiology, 2014, 55, 1017-1029.	1.5	61
45	Effects of different arbuscular mycorrhizal fungal backgrounds and soils on olive plants growth and water relation properties under wellâ€watered and drought conditions. Plant, Cell and Environment, 2016, 39, 2498-2514.	2.8	59
46	Identification of a Gene from the Arbuscular Mycorrhizal Fungus Glomus intraradices Encoding for a 14-3-3 Protein that is Up-Regulated by Drought Stress during the AM Symbiosis. Microbial Ecology, 2006, 52, 575-582.	1.4	56
47	Arbuscular mycorrhizal symbiosis and salicylic acid regulate aquaporins and root hydraulic properties in maize plants subjected to drought. Agricultural Water Management, 2018, 202, 271-284.	2.4	56
48	Efficiency of two arbuscular mycorrhizal fungal inocula to improve saline stress tolerance in lettuce plants by changes of antioxidant defense mechanisms. Journal of the Science of Food and Agriculture, 2020, 100, 1577-1587.	1.7	55
49	Synergic effect of salinity and zinc stress on growth and photosynthetic responses of the cordgrass, Spartina densiflora. Journal of Experimental Botany, 2011, 62, 5521-5530.	2.4	54
50	Host Response to Osmotic Stresses: Stomatal Behaviour and Water Use Efficiency of Arbuscular Mycorrhizal Plants. , 2010, , 239-256.		51
51	Plant potassium content modifies the effects of arbuscular mycorrhizal symbiosis on root hydraulic properties in maize plants. Mycorrhiza, 2012, 22, 555-564.	1.3	50
52	Influence of two bacterial isolates from degraded and non-degraded soils and arbuscular mycorrhizae fungi isolated from semi-arid zone on the growth of Trifolium repens under drought conditions: Mechanisms related to bacterial effectiveness. European Journal of Soil Biology, 2011, 47, 303-309.	1.4	48
53	Nitrogen assimilation and transpiration: key processes conditioning responsiveness of wheat to elevated [<scp>CO₂</scp>] and temperature. Physiologia Plantarum, 2015, 155, 338-354.	2.6	48
54	Importance of native arbuscular mycorrhizal inoculation in the halophyte Asteriscus maritimus for successful establishment and growth under saline conditions. Plant and Soil, 2013, 370, 175-185.	1.8	43

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55	Mild Salt Stress Conditions Induce Different Responses in Root Hydraulic Conductivity of Phaseolus vulgaris Over-Time. PLoS ONE, 2014, 9, e90631.	1.1	38
56	Proteomic analysis reveals that tomato interaction with plant growth promoting bacteria is highly determined by ethylene perception. Journal of Plant Physiology, 2018, 220, 43-59.	1.6	36
57	Radial water transport in arbuscular mycorrhizal maize plants under drought stress conditions is affected by indole-acetic acid (IAA) application. Journal of Plant Physiology, 2020, 246-247, 153115.	1.6	35
58	Aquaporins and cation transporters are differentially regulated by two arbuscular mycorrhizal fungi strains in lettuce cultivars growing under salinity conditions. Plant Physiology and Biochemistry, 2021, 158, 396-409.	2.8	35
59	A gene from the arbuscular mycorrhizal fungus Glomus intraradices encoding a binding protein is up-regulated by drought stress in some mycorrhizal plants. Environmental and Experimental Botany, 2007, 60, 251-256.	2.0	33
60	Contribution of the arbuscular mycorrhizal symbiosis to the regulation of radial root water transport in maize plants under water deficit. Environmental and Experimental Botany, 2019, 167, 103821.	2.0	33
61	Glutathione and transpiration as key factors conditioning oxidative stress in Arabidopsis thaliana exposed to uranium. Planta, 2014, 239, 817-830.	1.6	32
62	Photosynthetic and Molecular Markers of CO₂â€‘mediated Photosynthetic Downregulation in Nodulated Alfalfa. Journal of Integrative Plant Biology, 2013, 55, 721-734.	4.1	31
63	Arbuscular mycorrhizal fungus colonization in Nicotiana tabacum decreases the rate of both carboxylate exudation and root respiration and increases plant growth under phosphorus limitation. Plant and Soil, 2017, 416, 97-106.	1.8	31
64	Local root ABA/cytokinin status and aquaporins regulate poplar responses to mild drought stress independently of the ectomycorrhizal fungus Laccaria bicolor. Journal of Experimental Botany, 2019, 70, 6437-6446.	2.4	31
65	Modulation of Aquaporin Genes by the Arbuscular Mycorrhizal Symbiosis in Relation to Osmotic Stress Tolerance. Cellular Origin and Life in Extreme Habitats, 2010, , 357-374.	0.3	28
66	Exogenous Catalase and Ascorbate Modify the Effects of Abscisic Acid (ABA) on Root Hydraulic Properties in Phaseolus vulgaris L. Plants. Journal of Plant Growth Regulation, 2006, 25, 10-17.	2.8	27
67	Involvement of the def-1 Mutation in the Response of Tomato Plants to Arbuscular Mycorrhizal Symbiosis Under Well-Watered and Drought Conditions. Plant and Cell Physiology, 2018, 59, 248-261.	1.5	27
68	Different interaction among Glomus and Rhizobium species on Phaseolus vulgaris and Zea mays plant growth, physiology and symbiotic development under moderate drought stress conditions. Plant Growth Regulation, 2013, 70, 265-273.	1.8	26
69	Transcriptomic analysis reveals the importance of JA-Ile turnover in the response of Arabidopsis plants to plant growth promoting rhizobacteria and salinity. Environmental and Experimental Botany, 2017, 143, 10-19.	2.0	24
70	Molecular Insights into the Involvement of a Never Ripe Receptor in the Interaction Between Two Beneficial Soil Bacteria and Tomato Plants Under Well-Watered and Drought Conditions. Molecular Plant-Microbe Interactions, 2018, 31, 633-650.	1.4	23
71	Influence of arbuscular mycorrhizal fungi and water regime on the development of endemic Thymus species in dolomitic soils. Applied Soil Ecology, 2011, 48, 31-37.	2.1	22
72	Phosphorus concentration coordinates a respiratory bypass, synthesis and exudation of citrate, and the expression of highâ€‘affinity phosphorus transporters in <i>Solanum lycopersicum</i>. Plant, Cell and Environment, 2018, 41, 865-875.	2.8	21

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73	Elucidating the Possible Involvement of Maize Aquaporins and Arbuscular Mycorrhizal Symbiosis in the Plant Ammonium and Urea Transport under Drought Stress Conditions. Plants, 2020, 9, 148.	1.6	20
74	The application of a treated sugar beet waste residue to soil modifies the responses of mycorrhizal and non mycorrhizal lettuce plants to drought stress. Plant and Soil, 2011, 346, 153-166.	1.8	19
75	Respiratory ATP cost and benefit of arbuscular mycorrhizal symbiosis with Nicotiana tabacum at different growth stages and under salinity. Journal of Plant Physiology, 2017, 218, 243-248.	1.6	19
76	Elucidating the Possible Involvement of Maize Aquaporins in the Plant Boron Transport and Homeostasis Mediated by Rhizophagus irregularis under Drought Stress Conditions. International Journal of Molecular Sciences, 2020, 21, 1748.	1.8	17
77	Evaluation of the Possible Participation of Drought-induced Genes in the Enhanced Tolerance of Arbuscular Mycorrhizal Plants to Water Deficit. , 2008, , 185-205.		16
78	Tomato ethylene sensitivity determines interaction with plant growth-promoting bacteria. Annals of Botany, 2017, 120, 101-122.	1.4	16
79	Phenotypic and molecular traits determine the tolerance of olive trees to drought stress. Plant Physiology and Biochemistry, 2019, 139, 521-527.	2.8	14
80	Rhizobial symbiosis modifies root hydraulic properties in bean plants under non-stressed and salinity-stressed conditions. Planta, 2019, 249, 1207-1215.	1.6	14
81	Regulation of Root Water Uptake Under Drought Stress Conditions. , 2012, , 113-127.		13
82	Physiological and genetic control of transpiration efficiency in African rice, <i>Oryza glaberrima</i> Steud. Journal of Experimental Botany, 2022, 73, 5279-5293.	2.4	12
83	Arbuscular mycorrhizal symbiosis modifies the effects of a nitric oxide donor (sodium) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 34 lettuce plants under well watered and drought conditions. Symbiosis, 2018, 74, 11-20.	1.2	11
84	Arbuscular Mycorrhizal Fungi and the Tolerance of Plants to Drought and Salinity. Soil Biology, 2013, , 271-288.	0.6	9
85	Ethylene sensitivity and relative air humidity regulate root hydraulic properties in tomato plants. Planta, 2017, 246, 987-997.	1.6	8
86	Root hydraulics adjustment is governed by a dominant cell-to-cell pathway in Beta vulgaris seedlings exposed to salt stress. Plant Science, 2021, 306, 110873.	1.7	7
87	Improvement of Salt Tolerance in Rice Plants by Arbuscular Mycorrhizal Symbiosis. Soil Biology, 2018, , 259-279.	0.6	5
88	Molecular Aspects of Plant Salinity Stress and Tolerance. International Journal of Molecular Sciences, 2021, 22, 4918.	1.8	3
89	Short-Term Exposure to High Atmospheric Vapor Pressure Deficit (VPD) Severely Impacts Durum Wheat Carbon and Nitrogen Metabolism in the Absence of Edaphic Water Stress. Plants, 2021, 10, 120.	1.6	3
90	Plant Rootsâ€"The Hidden Half for Investigating Salt and Drought Stress Responses and Tolerance. Signaling and Communication in Plants, 2020, , 137-175.	0.5	3

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91	Categorization of the water status of rice inoculated with arbuscular mycorrhizae and with water deficit. Agronomy Mesoamerican, 0, , 339-355.	0.1	2
92	Determining Plant Water Relations. , 2018, , 109-134.		1
93	Techniques to Determine the Effects of Jasmonates on Root Hydraulic Conductivity. Methods in Molecular Biology, 2020, 2085, 29-39.	0.4	0