Rana Ellen Munns

List of Publications by Year
in descending order

131 papers	39,427 citations	9264 74 h-index	15732 125 g-index
133 all docs	133 docs citations	133 times ranked	18165 citing authors

#	Article	IF	Citations
1	Mechanisms of Salinity Tolerance. Annual Review of Plant Biology, 2008, 59, 651-681.	18.7	9,628
2	Comparative physiology of salt and water stress. Plant, Cell and Environment, 2002, 25, 239-250.	5.7	4,529
3	Mechanisms of Salt Tolerance in Nonhalophytes. Annual Review of Plant Physiology, 1980, 31, 149-190.	10.9	3,234
4	Genes and salt tolerance: bringing them together. New Phytologist, 2005, 167, 645-663.	7.3	2,304
5	Approaches to increasing the salt tolerance of wheat and other cereals. Journal of Experimental Botany, 2006, 57, 1025-1043.	4.8	1,484
6	Physiological processes limiting plant growth in saline soils: some dogmas and hypotheses. Plant, Cell and Environment, 1993, 16, 15-24.	5.7	1,161
7	Salinity tolerance of crops â€“ what is the cost?. New Phytologist, 2015, 208, 668-673.	7.3	868
8	Whole-Plant Responses to Salinity. Functional Plant Biology, 1986, 13, 143.	2.1	843
9	Wheat grain yield on saline soils is improved by an ancestral Na+ transporter gene. Nature Biotechnology, 2012, 30, 360-364.	17.5	690
10	Screening methods for salinity tolerance: a case study with tetraploid wheat. Plant and Soil, 2003, 253, 201-218.	3.7	609
11	Sodium chloride toxicity and the cellular basis of salt tolerance in halophytes. Annals of Botany, 2015, 115, 419-431.	2.9	516
12	Use of wild relatives to improve salt tolerance in wheat. Journal of Experimental Botany, 2006, 57, 1059-1078.	4.8	455
13	Using membrane transporters to improve crops for sustainable food production. Nature, 2013, 497, 60-66.	27.8	440
14	Major genes for Na+ exclusion, Nax1 and Nax2 (wheat HKT1;4 and HKT1;5), decrease Na+ accumulation in bread wheat leaves under saline and waterlogged conditions. Journal of Experimental Botany, 2011, 62, 2939-2947.	4.8	394
15	HKT1;5-Like Cation Transporters Linked to Na+ Exclusion Loci in Wheat, Nax2 and Kna1. Plant Physiology, 2007, 143, 1918-1928.	4.8	378
16	New phenotyping methods for screening wheat and barley for beneficial responses to water deficit. Journal of Experimental Botany, 2010, 61, 3499-3507.	4.8	359
17	Physiological Characterization of Two Genes for Na+ Exclusion in Durum Wheat, Nax1 and Nax2. Plant Physiology, 2006, 142, 1537-1547.	4.8	350
18	Soil Water Status Affects the Stomata1. Functional Plant Biology, 1986, 13, 459.	2.1	311

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19	Stomatal conductance as a screen for osmotic stress tolerance in durum wheat growing in saline soil. Functional Plant Biology, 2010, 37, 255.	2.1	288
20	Energy costs of salt tolerance in crop plants. New Phytologist, 2020, 225, 1072-1090.	7.3	284
21	A Sodium Transporter (HKT7) Is a Candidate for Nax1, a Gene for Salt Tolerance in Durum Wheat. Plant Physiology, 2006, 142, 1718-1727.	4.8	266
22	Control of Sodium Transport in Durum Wheat. Plant Physiology, 2005, 137, 807-818.	4.8	264
23	Factors affecting CO2 assimilation, leaf injury and growth in salt-stressed durum wheat. Functional Plant Biology, 2002, 29, 1393.	2.1	259
24	The Significance of a Two-Phase Growth Response to Salinity in Wheat and Barley. Functional Plant Biology, 1995, 22, 561.	2.1	258
25	Title is missing!. Plant and Soil, 2002, 247, 93-105.	3.7	252
26	Improving salt tolerance of wheat and barley: future prospects. Australian Journal of Experimental Agriculture, 2005, 45, 1425.	1.0	245
27	Osmotic adjustment and energy limitations to plant growth in saline soil. New Phytologist, 2020, 225, 1091-1096.	7.3	245
28	Genetic variation for improving the salt tolerance of durum wheat. Australian Journal of Agricultural Research, 2000, 51, 69.	1.5	218
29	Effect of Water Stress on Cell Division and Cdc2-Like Cell Cycle Kinase Activity in Wheat Leaves1. Plant Physiology, 1998, 117, 667-678.	4.8	217
30	The art of growing plants for experimental purposes: a practical guide for the plant biologist. Functional Plant Biology, 2012, 39, 821.	2.1	217
31	Stomatal control in tomato with ABAâ€deficient roots: response of grafted plants to soil drying. Journal of Experimental Botany, 2002, 53, 1503-1514.	4.8	205
32	A locus for sodium exclusion (Nax1), a trait for salt tolerance, mapped in durum wheat. Functional Plant Biology, 2004, 31, 1105.	2.1	203
33	Why Measure Osmotic Adjustment?. Functional Plant Biology, 1988, 15, 717.	2.1	198
34	Stomatal control in tomato with ABA-deficient roots: response of grafted plants to soil drying. Journal of Experimental Botany, 2002, 53, 1503-1514.	4.8	191
35	Shoot Turgor Does Not Limit Shoot Growth of NaCl-Affected Wheat and Barley. Plant Physiology, 1985, 77, 869-872.	4.8	188
36	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. Journal of Experimental Botany, 2017, 68, 3129-3143.	4.8	187

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37	Photosynthetic capacity is related to the cellular and subcellular partitioning of Na+, K+and Cl-in salt-affected barley and durum wheat. Plant, Cell and Environment, 2006, 29, 2185-2197.	5.7	180
38	Abscisic Acid Is Not the Only Stomatal Inhibitor in the Transpiration Stream of Wheat Plants. Plant Physiology, 1988, 88, 703-708.	4.8	178
39	Water relations and leaf expansion: importance of time scale. Journal of Experimental Botany, 2000, 51, 1495-1504.	4.8	171
40	Comparative mapping of HKT genes in wheat, barley, and rice, key determinants of Na+ transport, and salt tolerance. Journal of Experimental Botany, 2008, 59, 927-937.	4.8	170
41	The Na⁺ transporter, Ta<scp>HKT</scp>1;5â€Đ, limits shoot Na⁺ accumulation in bread wheat. Plant Journal, 2014, 80, 516-526.	5.7	170
42	Stomatal control in tomato with ABA-deficient roots: response of grafted plants to soil drying. Journal of Experimental Botany, 2002, 53, 1503-14.	4.8	165
43	Tissue tolerance: an essential but elusive trait for salt-tolerant crops. Functional Plant Biology, 2016, 43, 1103.	2.1	162
44	Root cell wall solutions for crop plants in saline soils. Plant Science, 2018, 269, 47-55.	3.6	159
45	Contribution of Sugars to Osmotic Adjustment in Elongating and Expanded Zones of Wheat Leaves During Moderate Water Deficits at Two Light Levels. Functional Plant Biology, 1981, 8, 93.	2.1	151
46	Plant Adaptations to Salt and Water Stress. Advances in Botanical Research, 2011, , 1-32.	1.1	149
47	Ion Concentration and Carbohydrate Status of the Elongating Leaf Tissue 4Hordeum vulgare Growing at High External NaCl: II. CAUSE OF THE GROWTH REDUCTION. Journal of Experimental Botany, 1982, 33, 574-583.	4.8	141
48	Is coordination of leaf and root growth mediated by abscisic acid? Opinion. Plant and Soil, 1996, 185, 33-49.	3.7	140
49	Involvement of Abscisic Acid in Controlling Plant Growth in Soil of Low Water Potential. Functional Plant Biology, 1993, 20, 425.	2.1	132
50	Measuring Soluble Ion Concentrations (Na+, K+, Clâˆ’) in Salt-Treated Plants. Methods in Molecular Biology, 2010, 639, 371-382.	0.9	132
51	Solute Accumulation in the Apex and Leaves of Wheat During Water Stress. Functional Plant Biology, 1979, 6, 379.	2.1	128
52	Na+, K+and Clâˆ’in Xylem Sap Flowing to Shoots of NaCl-Treated Barley. Journal of Experimental Botany, 1985, 36, 1032-1042.	4.8	128
53	Genetic variation in tolerance to the osmotic stress componentof salinity stress in durum wheat. Functional Plant Biology, 2008, 35, 111.	2.1	126
54	An examination of selection criteria for salt tolerance in wheat, barley and triticale genotypes. Australian Journal of Agricultural Research, 1988, 39, 759.	1.5	121

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55	The Role of the Stem in the Partitioning of Na+and K+in Salt-Treated Barley. Journal of Experimental Botany, 1991, 42, 697-704.	4.8	121
56	Genetically Engineered Plants Resistant to Soil Drying and Salt Stress: How to Interpret Osmotic Relations?. Plant Physiology, 1996, 110, 1051-1053.	4.8	117
57	Genetic control of sodium exclusion in durum wheat. Australian Journal of Agricultural Research, 2003, 54, 627.	1.5	115
58	A screening method to identify genetic variation in root growth response to a salinity gradient. Journal of Experimental Botany, 2011, 62, 69-77.	4.8	114
59	Hydraulic Resistance of Plants. II. Effects of Rooting Medium, and Time of Day, in Barley and Lupin. Functional Plant Biology, 1984, 11, 341.	2.1	109
60	Sodium Accumulation in Leaves of Triticum Species That Differ in Salt Tolerance. Functional Plant Biology, 1992, 19, 331.	2.1	108
61	Hydraulic Resistance of Plants. III. Effects of NaCl in Barley and Lupin. Functional Plant Biology, 1984, 11, 351.	2.1	101
62	Osmotic adjustment leads to anomalously low estimates of relative water content in wheat and barley. Functional Plant Biology, 2008, 35, 1172.	2.1	100
63	Ion Concentration and Carbohydrate Status of the Elongating Leaf Tissue 4Hordeum vulgare Growing at High External NaCl: I. RELATIONSHIP BETWEEN SOLUTE CONCENTRATION AND GROWTH. Journal of Experimental Botany, 1982, 33, 557-573.	4.8	99
64	Variation in Sodium Exclusion and Salt Tolerance in <i>Triticum tauschii</i>. Crop Science, 1991, 31, 992-997.	1.8	98
65	<i>Nax</i>loci affect SOS1-like Na⁺/H⁺exchanger expression and activity in wheat. Journal of Experimental Botany, 2016, 67, 835-844.	4.8	95
66	Effect of salinity on water relations and growth of wheat genotypes with contrasting sodium uptake. Functional Plant Biology, 2002, 29, 1065.	2.1	93
67	The potential for developing fodder plants for the salt-affected areas of southern and eastern Australia: an overview. Australian Journal of Experimental Agriculture, 2005, 45, 301.	1.0	92
68	Cellâ€specific localization of Na⁺ in roots of durum wheat and possible control points for salt exclusion. Plant, Cell and Environment, 2008, 31, 1565-1574.	5.7	90
69	Impact of ancestral wheat sodium exclusion genes Nax1 and Nax2 on grain yield of durum wheat on saline soils. Functional Plant Biology, 2012, 39, 609.	2.1	86
70	Water Status and ABA Content of Floral Organs in Drought-Stressed Wheat. Functional Plant Biology, 1996, 23, 763.	2.1	83
71	Effect of sodium exclusion trait on chlorophyll retention and growth of durum wheat in saline soil. Australian Journal of Agricultural Research, 2003, 54, 589.	1.5	82
72	Effect of salinity on salt accumulation and reproductive development in the apical meristem of wheat and barley. Functional Plant Biology, 1999, 26, 459.	2.1	78

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73	Plant Responses to Salinity Under Elevated Atmospheric Concentrations of CO2. Australian Journal of Botany, 1992, 40, 515.	0.6	76
74	Use of Concentrated Macronutrient Solutions to Separate Osmotic from NaCl-specific Effects on Plant Growth. Functional Plant Biology, 1986, 13, 509.	2.1	75
75	Water Relations of the Developing Wheat Grain. Functional Plant Biology, 1980, 7, 519.	2.1	73
76	Control of salt transport from roots to shoots of wheat in saline soil. Functional Plant Biology, 2004, 31, 1115.	2.1	73
77	The expression of salt tolerance from Triticum tauschii in hexaploid wheat. Theoretical and Applied Genetics, 1992, 84-84, 714-719.	3.6	72
78	Concentrations and Transport of Solutes in Xylem and Phloem along the Leaf Axis of NaCl-treatedHordeum vulgare. Journal of Experimental Botany, 1990, 41, 1133-1141.	4.8	70
79	Interactions between growth, uptake of Cl- and Na+, and water relations of plants in saline environments. II. Highly vacuolated cells. Plant, Cell and Environment, 1983, 6, 575-589.	5.7	66
80	A Sodium Transporter HvHKT1;1 Confers Salt Tolerance in Barley via Regulating Tissue and Cell Ion Homeostasis. Plant and Cell Physiology, 2018, 59, 1976-1989.	3.1	66
81	Abscisic Acid Levels in Nacl-Treated Barley, Cotton and Saltbush. Functional Plant Biology, 1991, 18, 17.	2.1	66
82	Effect of foliar applications of glycinebetaine on stomatal conductance, abscisic acid and solute concentrations in leaves of salt- or drought-stressed tomato. Functional Plant Biology, 1998, 25, 655.	2.1	64
83	Elevated CO2 Improves the Growth of Wheat Under Salinity. Functional Plant Biology, 1993, 20, 349.	2.1	61
84	Avenues for increasing salt tolerance of crops, and the role of physiologically based selection traits. , 2002, , 93-105.		61
85	Growth and Development in NaCl-Treated Plants. I. Leaf Na+ and Cl- Concentrations Do Not Determine Gas Exchange of Leaf Blades in Barley. Functional Plant Biology, 1988, 15, 519.	2.1	59
86	Reduced growth and yield of wheat with conservation cropping. II. Soil biological factors limit growth under direct drilling. Australian Journal of Agricultural Research, 1995, 46, 75.	1.5	56
87	Effect of Prolonged Exposure to Nacl on the Osmotic Pressure of Leaf Xylem Sap From Intact, Transpiring Barley Plants. Functional Plant Biology, 1984, 11, 497.	2.1	55
88	Growth and Development in NaCl-Treated Plants. II. Do Na+ or Cl- Concentrations in Dividing or Expanding Tissues Determine Growth in Barley?. Functional Plant Biology, 1988, 15, 529.	2.1	53
89	Breeding strategies for structuring salinity tolerance in wheat. Advances in Agronomy, 2019, 155, 121-187.	5.2	53
90	A Leaf Elongation Assay Detects an Unknown Growth Inhibitor in Xylem Sap From Wheat and Barley. Functional Plant Biology, 1992, 19, 127.	2.1	52

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91	Turgor Pressure, Volumetric Elastic Modulus, Osmotic Volume and Ultrastructure of Chlorella emersonii Grown at High and Low External NaCl. Journal of Experimental Botany, 1983, 34, 144-155.	4.8	50
92	Effect of high external NaCl concentration on ion transport within the shoot of Lupinus albus. II. Ions in phloem sap. Plant, Cell and Environment, 1988, 11, 291-300.	5.7	47
93	Stored xylem sap from wheat and barley in drying soil contains a transpiration inhibitor with a large molecular size. Plant, Cell and Environment, 1993, 16, 867-872.	5.7	47
94	Leaf expansion in sunflower as influenced by salinity and short-term changes in carbon fixation.. Plant, Cell and Environment, 1984, 7, 207-213.	5.7	45
95	Structural variations in wheat HKT1;5 underpin differences in Na+ transport capacity. Cellular and Molecular Life Sciences, 2018, 75, 1133-1144.	5.4	45
96	Growth of tomato and an ABA-deficient mutant (sitiens) under saline conditions. Physiologia Plantarum, 2003, 117, 58-63.	5.2	43
97	Rapid environmental changes that affect leaf water status induce transient surges or pauses in leaf expansion rate.. Functional Plant Biology, 2000, 27, 941.	2.1	42
98	Approaches to Identifying Genes for Salinity Tolerance and the Importance of Timescale. Methods in Molecular Biology, 2010, 639, 25-38.	0.9	42
99	Na+ and Cl- Transport in the Phloem from Leaves of NaCl-treated Barley. Functional Plant Biology, 1986, 13, 757.	2.1	39
100	Water Potential, Growth, and Polyribosome Content of the Stressed Wheat Apex. Journal of Experimental Botany, 1977, 28, 909-916.	4.8	38
101	Salt tolerance, date of flowering and rain affect the productivity of wheat and barley on rainfed saline land. Field Crops Research, 2016, 194, 31-42.	5.1	38
102	Adaptation of sugarcane plants to saline soil. Environmental and Experimental Botany, 2019, 162, 201-211.	4.2	37
103	Effect of high external NaCl concentrations on ion transport within the shoot of Lupinus albus. I. Ions in xylem sap. Plant, Cell and Environment, 1988, 11, 283-289.	5.7	36
104	Interactions between Rising CO2, Soil Salinity, and Plant Growth. , 1999, , 139-167.		34
105	Leaf water status controls day-time but not daily rates of leaf expansion in salt-treated barley.. Functional Plant Biology, 2000, 27, 949.	2.1	32
106	Living with salinity. New Phytologist, 2008, 179, 903-905.	7.3	32
107	Polyribosome Content in Young and Aged Wheat Leaves Subjected to Drought. Journal of Experimental Botany, 1979, 30, 905-911.	4.8	28
108	Hordeum marinum-wheat amphiploids maintain higher leaf K+:Na+ and suffer less leaf injury than wheat parents in saline conditions. Plant and Soil, 2011, 348, 365-377.	3.7	28

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109	Leaf expansion in sunflower as influenced by salinity and short-term changes in carbon fixation. Plant, Cell and Environment, 1984, 7, 207-213.	5.7	26
110	Interactions between growth, Cl- and Na+ uptake, and water relations of plants in saline environments. I. Slightly vacuolated cells. Plant, Cell and Environment, 1983, 6, 567-574.	5.7	25
111	Chloroplast and cytoplasmic ribosomes in Euglena gracilis. FEBS Letters, 1970, 10, 149-152.	2.8	24
112	Does shoot water status limit leaf expansion of nitrogen-deprived barley?. Journal of Experimental Botany, 2002, 53, 1765-1770.	4.8	22
113	Does water and phosphorus uptake limit leaf growth of Rhizoctonia-infected wheat seedlings?. Plant and Soil, 1999, 209, 157-166.	3.7	20
114	A unique web resource for physiology, ecology and the environmental sciences: PrometheusWiki. Functional Plant Biology, 2010, 37, 687.	2.1	20
115	Recent Advances in Breeding Wheat for Drought and Salt Stresses. , 2007, , 565-585.		20
116	Effects of accumulation of 3-O-methylglucose on levels of endogenous osmotic solutes in Chlorella emersonii. Plant, Cell and Environment, 1982, 5, 405-412.	5.7	16
117	Reliability of ion accumulation and growth components for selecting salt tolerant lines in large populations of rice. Functional Plant Biology, 2014, 41, 379.	2.1	15
118	Use of genetic tolerance in grain crops to overcome subsoil constraints in alkaline cropping soils. Soil Research, 2010, 48, 188.	1.1	15
119	RNA synthesis during chloroplast development in Euglena gracilis. Phytochemistry, 1972, 11, 45-52.	2.9	14
120	Prophylactively parking sodium in the plant. New Phytologist, 2007, 176, 501-504.	7.3	14
121	Effects of accumulation of 3-O-methylglucose on growth and osmotic regulation in Chlorella emersonii. Plant, Cell and Environment, 1982, 5, 413-416.	5.7	11
122	Salinity, Growth and Phytohormones. , 2002, , 271-290.		11
123	Proteomic analysis of young sugarcane plants with contrasting salt tolerance. Functional Plant Biology, 2021, 48, 588.	2.1	10
124	Distinct salinity-induced changes in wheat metabolic machinery in different root tissue types. Journal of Proteomics, 2022, 256, 104502.	2.4	10
125	Contribution of Rhizoctonia to reduced seedling growth of direct-drilled wheat: studies with intact cores. Australian Journal of Agricultural Research, 1997, 48, 1231.	1.5	8
126	Yellow lupin (Lupinus luteus) tolerates waterlogging better than narrow-leafed lupin (L.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 Td (an Agricultural Research, 2000, 51, 729.	1.5	7

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127	Rapidly labelled ribosomal RNA from the agranular microsomal membranes of rat liver. Archives of Biochemistry and Biophysics, 1968, 127, 419-425.	3.0	5
128	What makes a plant science manuscript successful for publication?. Functional Plant Biology, 2020, 47, 1138.	2.1	3
129	Plants and salt.. New Phytologist, 2000, 148, 219-219.	7.3	0
130	Protocols and phenotyping: new wikis and manuals. Functional Plant Biology, 2014, 41, v.	2.1	0
131	Regulation of Shoot Growth in Dry Soils by Abscisic Acid and by Root Messages. , 1994, , 303-313.		0