Giles E D Oldroyd

List of Publications by Year
in descending order

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121
papers

22,721
citations

8181
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171
all docs

171
docs citations

171
times ranked

13821
citing authors

#	Article	IF	Citations
1	Speak, friend, and enter: signalling systems that promote beneficial symbiotic associations in plants. Nature Reviews Microbiology, 2013, 11, 252-263.	28.6	1,373
2	The Medicago genome provides insight into the evolution of rhizobial symbioses. Nature, 2011, 480, 520-524.	27.8	1,166
3	The Rules of Engagement in the Legume-Rhizobial Symbiosis. Annual Review of Genetics, 2011, 45, 119-144.	7.6	1,008
4	Coordinating Nodule Morphogenesis with Rhizobial Infection in Legumes. Annual Review of Plant Biology, 2008, 59, 519-546.	18.7	942
5	Genetic strategies for improving crop yields. Nature, 2019, 575, 109-118.	27.8	799
6	Plant signalling in symbiosis and immunity. Nature, 2017, 543, 328-336.	27.8	576
7	Tomato Prf Is a Member of the Leucine-Rich Repeat Class of Plant Disease Resistance Genes and Lies Embedded within the Pto Kinase Gene Cluster. Cell, 1996, 86, 123-133.	28.9	553
8	Nodulation Signaling in Legumes Requires NSP2, a Member of the GRAS Family of Transcriptional Regulators. Science, 2005, 308, 1786-1789.	12.6	525
9	Fatty acids in arbuscular mycorrhizal fungi are synthesized by the host plant. Science, 2017, 356, 1175-1178.	12.6	503
10	Medicago truncatula DMI1 Required for Bacterial and Fungal Symbioses in Legumes. Science, 2004, 303, 1364-1367.	12.6	493
11	Symbiotic Nitrogen Fixation and the Challenges to Its Extension to Nonlegumes. Applied and Environmental Microbiology, 2016, 82, 3698-3710.	3.1	443
12	From The Cover: A Ca2+/calmodulin-dependent protein kinase required for symbiotic nodule development: Gene identification by transcript-based cloning. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4701-4705.	7.1	433
13	Medicago truncatula NIN Is Essential for Rhizobial-Independent Nodule Organogenesis Induced by Autoactive Calcium/Calmodulin-Dependent Protein Kinase. Plant Physiology, 2007, 144, 324-335.	4.8	404
14	The NFP locus of Medicago truncatula controls an early step of Nod factor signal transduction upstream of a rapid calcium flux and root hair deformation. Plant Journal, 2003, 34, 495-506.	5.7	350
15	Nodulation independent of rhizobia induced by a calcium-activated kinase lacking autoinhibition. Nature, 2006, 441, 1149-1152.	27.8	350
16	GRAS Proteins Form a DNA Binding Complex to Induce Gene Expression during Nodulation Signaling in <i>Medicago truncatula</i> Â. Plant Cell, 2009, 21, 545-557.	6.6	342
17	The Root Hair â€œInfectomeâ€•of <i>Medicago truncatula</i> Uncovers Changes in Cell Cycle Genes and Reveals a Requirement for Auxin Signaling in Rhizobial Infection. Plant Cell, 2014, 26, 4680-4701.	6.6	313
18	Calcium, kinases and nodulation signalling in legumes. Nature Reviews Molecular Cell Biology, 2004, 5, 566-576.	37.0	312

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19	An ERF Transcription Factor in Medicago truncatula That Is Essential for Nod Factor Signal Transduction. Plant Cell, 2007, 19, 1221-1234.	6.6	298
20	Algal ancestor of land plants was preadapted for symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13390-13395.	7.1	292
21	A Common Signaling Process that Promotes Mycorrhizal and Oomycete Colonization of Plants. Current Biology, 2012, 22, 2242-2246.	3.9	291
22	Legume genome evolution viewed through the Medicago truncatula and Lotus japonicus genomes. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14959-14964.	7.1	286
23	Ethylene Inhibits the Nod Factor Signal Transduction Pathway of <i>Medicago truncatula</i>. Plant Cell, 2001, 13, 1835-1849.	6.6	268
24	Genetic analysis of calcium spiking responses in nodulation mutants of Medicago truncatula. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 13407-13412.	7.1	265
25	Standards for plant synthetic biology: a common syntax for exchange of <scp>DNA</scp> parts. New Phytologist, 2015, 208, 13-19.	7.3	263
26	Differential and chaotic calcium signatures in the symbiosis signaling pathway of legumes. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9823-9828.	7.1	262
27	A GRAS-Type Transcription Factor with a Specific Function in Mycorrhizal Signaling. Current Biology, 2012, 22, 2236-2241.	3.9	262
28	Biotechnological solutions to the nitrogen problem. Current Opinion in Biotechnology, 2014, 26, 19-24.	6.6	259
29	A plantâ€™s diet, surviving in a variable nutrient environment. Science, 2020, 368, .	12.6	241
30	The Tomato NBARC-LRR Protein Prf Interacts with Pto Kinase in Vivo to Regulate Specific Plant Immunity. Plant Cell, 2006, 18, 2792-2806.	6.6	239
31	The receptor kinase <i><scp>CERK</scp>1</i> has dual functions in symbiosis and immunity signalling. Plant Journal, 2015, 81, 258-267.	5.7	232
32	Nuclear-localized cyclic nucleotideâ€"gated channels mediate symbiotic calcium oscillations. Science, 2016, 352, 1102-1105.	12.6	230
33	Nuclear calcium changes at the core of symbiosis signalling. Current Opinion in Plant Biology, 2006, 9, 351-357.	7.1	228
34	Legume pectate lyase required for root infection by rhizobia. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 633-638.	7.1	225
35	<i>Vapyrin</i>, a gene essential for intracellular progression of arbuscular mycorrhizal symbiosis, is also essential for infection by rhizobia in the nodule symbiosis of <i>Medicago truncatula</i>. Plant Journal, 2011, 65, 244-252.	5.7	211
36	The calcium-permeable channel OSCA1.3 regulates plant stomatal immunity. Nature, 2020, 585, 569-573.	27.8	208

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37	Crosstalk between jasmonic acid, ethylene and Nod factor signaling allows integration of diverse inputs for regulation of nodulation. Plant Journal, 2006, 46, 961-970.	5.7	204
38	GRAS-domain transcription factors that regulate plant development. Plant Signaling and Behavior, 2009, 4, 698-700.	2.4	198
39	Nuclear membranes control symbiotic calcium signaling of legumes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14348-14353.	7.1	191
40	Identification and Characterization of Nodulation-Signaling Pathway 2, a Gene of Medicago truncatula Involved in Nod Factor Signaling. Plant Physiology, 2003, 131, 1027-1032.	4.8	190
41	Abscisic Acid Coordinates Nod Factor and Cytokinin Signaling during the Regulation of Nodulation in <i>Medicago truncatula</i>. Plant Cell, 2008, 20, 2681-2695.	6.6	189
42	Activation of Symbiosis Signaling by Arbuscular Mycorrhizal Fungi in Legumes and Rice. Plant Cell, 2015, 27, 823-838.	6.6	188
43	Genetically engineered broad-spectrum disease resistance in tomato. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 10300-10305.	7.1	186
44	The NIN Transcription Factor Coordinates Diverse Nodulation Programs in Different Tissues of the <i>Medicago truncatula</i> Root. Plant Cell, 2015, 27, 3410-3424.	6.6	178
45	NODULE INCEPTION Recruits the Lateral Root Developmental Program for Symbiotic Nodule Organogenesis in Medicago truncatula. Current Biology, 2019, 29, 3657-3668.e5.	3.9	177
46	Understanding the Arbuscule at the Heart of Endomycorrhizal Symbioses in Plants. Current Biology, 2017, 27, R952-R963.	3.9	176
47	EFD Is an ERF Transcription Factor Involved in the Control of Nodule Number and Differentiation in<i>Medicago truncatula</i>. Plant Cell, 2008, 20, 2696-2713.	6.6	172
48	A DELLA protein complex controls the arbuscular mycorrhizal symbiosis in plants. Cell Research, 2014, 24, 130-133.	12.0	168
49	Analysis of Nod-Factor-Induced Calcium Signaling in Root Hairs of Symbiotically Defective Mutants of Lotus japonicus. Molecular Plant-Microbe Interactions, 2006, 19, 914-923.	2.6	164
50	Reprogramming Plant Cells for Endosymbiosis. Science, 2009, 324, 753-754.	12.6	160
51	Synthetic biology approaches to engineering the nitrogen symbiosis in cereals. Journal of Experimental Botany, 2014, 65, 1939-1946.	4.8	160
52	Analysis of calcium spiking using a cameleon calcium sensor reveals that nodulation gene expression is regulated by calcium spike number and the developmental status of the cell. Plant Journal, 2006, 48, 883-894.	5.7	150
53	An ancestral signalling pathway is conserved in intracellular symbioses-forming plant lineages. Nature Plants, 2020, 6, 280-289.	9.3	150
54	Rearrangement of Actin Cytoskeleton Mediates Invasion of<i>Lotus japonicus</i>Roots by<i>Mesorhizobium loti</i>Â Â. Plant Cell, 2009, 21, 267-284.	6.6	149

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55	<i>Medicago truncatula IPD3</i> Is a Member of the Common Symbiotic Signaling Pathway Required for Rhizobial and Mycorrhizal Symbioses. Molecular Plant-Microbe Interactions, 2011, 24, 1345-1358.	2.6	147
56	Receptor-mediated chitin perception in legume roots is functionally separable from Nod factor perception. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8118-E8127.	7.1	143
57	Red clover (Trifolium pratense L.) draft genome provides a platform for trait improvement. Scientific Reports, 2015, 5, 17394.	3.3	136
58	How close are we to nitrogen-fixing cereals?. Current Opinion in Plant Biology, 2010, 13, 556-564.	7.1	134
59	A H+-ATPase That Energizes Nutrient Uptake during Mycorrhizal Symbioses in Rice and <i>Medicago truncatula</i> Â Â Â. Plant Cell, 2014, 26, 1818-1830.	6.6	131
60	A combination of chitooligosaccharide and lipochitooligosaccharide recognition promotes arbuscular mycorrhizal associations in Medicago truncatula. Nature Communications, 2019, 10, 5047.	12.8	129
61	<i>Medicago truncatula</i> ERN Transcription Factors: Regulatory Interplay with NSP1/NSP2 GRAS Factors and Expression Dynamics throughout Rhizobial Infection Â. Plant Physiology, 2012, 160, 2155-2172.	4.8	127
62	Calcium/Calmodulin-Dependent Protein Kinase Is Negatively and Positively Regulated by Calcium, Providing a Mechanism for Decoding Calcium Responses during Symbiosis Signaling Â. Plant Cell, 2014, 25, 5053-5066.	6.6	124
63	NIN Acts as a Network Hub Controlling a Growth Module Required for Rhizobial Infection. Plant Physiology, 2019, 179, 1704-1722.	4.8	106
64	The negative regulator SMAX1 controls mycorrhizal symbiosis and strigolactone biosynthesis in rice. Nature Communications, 2020, 11, 2114.	12.8	101
65	Peace Talks and Trade Deals. Keys to Long-Term Harmony in Legume-Microbe Symbioses: Figure 1.. Plant Physiology, 2005, 137, 1205-1210.	4.8	99
66	The <i>Medicago truncatula</i> DMI1 Protein Modulates Cytosolic Calcium Signaling. Plant Physiology, 2007, 145, 192-203.	4.8	99
67	Deletion-Based Reverse Genetics in <i>Medicago truncatula</i> Â Â Â. Plant Physiology, 2009, 151, 1077-1086.	4.8	97
68	Engineering transkingdom signalling in plants to control gene expression in rhizosphere bacteria. Nature Communications, 2019, 10, 3430.	12.8	93
69	Positioning the nodule, the hormone dictum. Plant Signaling and Behavior, 2009, 4, 89-93.	2.4	92
70	Rhizobial Infection Is Associated with the Development of Peripheral Vasculature in Nodules of<i>Medicago truncatula</i>Â Â Â. Plant Physiology, 2013, 162, 107-115.	4.8	92
71	Lipid exchanges drove the evolution of mutualism during plant terrestrialization. Science, 2021, 372, 864-868.	12.6	90
72	The <i>ROOT DETERMINED NODULATION1</i> Gene Regulates Nodule Number in Roots of <i>Medicago truncatula</i> and Defines a Highly Conserved, Uncharacterized Plant Gene Family Â Â Â. Plant Physiology, 2011, 157, 328-340.	4.8	89

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73	Bacterialâ€induced calcium oscillations are common to nitrogenâ€fixing associations of nodulating legumes and nonâ€legumes. New Phytologist, 2015, 207, 551-558.	7.3	89
74	Ligand-recognizing motifs in plant LysM receptors are major determinants of specificity. Science, 2020, 369, 663-670.	12.6	87
75	Highly syntenic regions in the genomes of soybean, Medicago truncatula, and Arabidopsis thaliana. BMC Plant Biology, 2005, 5, 15.	3.6	86
76	LIN, a Novel Type of U-Box/WD40 Protein, Controls Early Infection by Rhizobia in Legumes Â Â Â. Plant Physiology, 2009, 151, 1239-1249.	4.8	84
77	Evidence for structurally specific negative feedback in the Nod factor signal transduction pathway. Plant Journal, 2001, 28, 191-199.	5.7	82
78	One hundred important questions facing plant science research. New Phytologist, 2011, 192, 6-12.	7.3	82
79	Abscisic Acid Promotion of Arbuscular Mycorrhizal Colonization Requires a Component of the PROTEIN PHOSPHATASE 2A Complex Â Â. Plant Physiology, 2014, 166, 2077-2090.	4.8	81
80	<i>RAM1</i>and<i>RAM2</i>function and expression during Arbuscular Mycorrhizal Symbiosis and<i>Aphanomyces euteiches</i>colonization. Plant Signaling and Behavior, 2013, 8, e26049.	2.4	76
81	Calcium Spiking Patterns and the Role of the Calcium/Calmodulin-Dependent Kinase CCaMK in Lateral Root Base Nodulation of <i>Sesbania rostrata</i> Â Â. Plant Cell, 2009, 21, 1526-1540.	6.6	75
82	A protein complex required for polar growth of rhizobial infection threads. Nature Communications, 2019, 10, 2848.	12.8	72
83	PLANT SCIENCE: Nodules and Hormones. Science, 2007, 315, 52-53.	12.6	71
84	<i>Lotus japonicus symRKâ€‐14</i> uncouples the cortical and epidermal symbiotic program. Plant Journal, 2011, 67, 929-940.	5.7	71
85	Nuclear Calcium Signaling in Plants. Plant Physiology, 2013, 163, 496-503.	4.8	70
86	Conservation in Function of a SCAR/WAVE Component During Infection Thread and Root Hair Growth in <i>Medicago truncatula</i>. Molecular Plant-Microbe Interactions, 2010, 23, 1553-1562.	2.6	69
87	Dissecting Symbiosis: Developments in Nod Factor Signal Transduction. Annals of Botany, 2001, 87, 709-718.	2.9	67
88	<i>Sesbania rostrata</i>: a case study of natural variation in legume nodulation. New Phytologist, 2010, 186, 340-345.	7.3	60
89	MtLAX2, a Functional Homologue of the Arabidopsis Auxin Influx Transporter AUX1, Is Required for Nodule Organogenesis. Plant Physiology, 2017, 174, 326-338.	4.8	56
90	A <i>Medicago truncatula</i> Cystathionine-Î²-Synthase-like Domain-Containing Protein Is Required for Rhizobial Infection and Symbiotic Nitrogen Fixation. Plant Physiology, 2016, 170, 2204-2217.	4.8	55

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91	The identification of novel loci required for appropriate nodule development in Medicago truncatula. BMC Plant Biology, 2013, 13, 157.	3.6	53
92	Plants expressing thePtodisease resistance gene confer resistance to recombinant PVX containing the avirulence geneAvrPto. Plant Journal, 1999, 17, 41-50.	5.7	52
93	Rhizobial and Mycorrhizal Symbioses in Lotus japonicus Require Lectin Nucleotide Phosphohydrolase, Which Acts Upstream of Calcium Signaling Â Â Â. Plant Physiology, 2012, 161, 556-567.	4.8	51
94	The Symbiosis-Related ERN Transcription Factors Act in Concert to Coordinate Rhizobial Host Root Infection. Plant Physiology, 2016, 171, pp.00230.2016.	4.8	48
95	Mastoparan Activates Calcium Spiking Analogous to Nod Factor-Induced Responses in Medicago truncatula Root Hair Cells. Plant Physiology, 2007, 144, 695-702.	4.8	46
96	Tracing the evolutionary path to nitrogen-fixing crops. Current Opinion in Plant Biology, 2015, 26, 95-99.	7.1	44
97	Hostâ€specific <scp>N</scp>odâ€factors associated with <i><scp>M</scp>edicago truncatula</i> nodule infection differentially induce calcium influx and calcium spiking in root hairs. New Phytologist, 2013, 200, 656-662.	7.3	42
98	Callose-Regulated Symplastic Communication Coordinates Symbiotic Root Nodule Development. Current Biology, 2018, 28, 3562-3577.e6.	3.9	41
99	<i>MtNODULE ROOT1</i> and <i>MtNODULE ROOT2</i> Are Essential for Indeterminate Nodule Identity. Plant Physiology, 2018, 178, 295-316.	4.8	40
100	Buffering Capacity Explains Signal Variation in Symbiotic Calcium Oscillations Â Â Â. Plant Physiology, 2012, 160, 2300-2310.	4.8	39
101	Processing of NODULE INCEPTION controls the transition to nitrogen fixation in root nodules. Science, 2021, 374, 629-632.	12.6	33
102	Engineered plant control of associative nitrogen fixation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117465119.	7.1	32
103	Atypical Receptor Kinase RINRK1 Required for Rhizobial Infection But Not Nodule Development in <i>Lotus japonicus</i>. Plant Physiology, 2019, 181, 804-816.	4.8	28
104	Characterizing standard genetic parts and establishing common principles for engineering legume and cereal roots. Plant Biotechnology Journal, 2019, 17, 2234-2245.	8.3	28
105	Phosphorylation of S344 in the calmodulinâ€binding domain negatively affects <scp>CCaMK</scp> function during bacterial and fungal symbioses. Plant Journal, 2013, 76, 287-296.	5.7	26
106	The role of DMI1 in establishing Ca²⁺oscillations in legume symbioses. Plant Signaling and Behavior, 2013, 8, e22894.	2.4	20
107	Calcium Ion Binding Properties of <i>Medicago truncatula</i> Calcium/Calmodulin-Dependent Protein Kinase. Biochemistry, 2012, 51, 6895-6907.	2.5	19
108	Nonlinear Time Series Analysis of Nodulation Factor Induced Calcium Oscillations: Evidence for Deterministic Chaos?. PLoS ONE, 2009, 4, e6637.	2.5	18

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109	A mycorrhiza-associated receptor-like kinase with an ancient origin in the green lineage. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	15
110	Automated Bayesian model development for frequency detection in biological time series. BMC Systems Biology, 2011, 5, 97.	3.0	14
111	How CYCLOPS keeps an eye on plant symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20053-20054.	7.1	12
112	The broad spectrum of plant associations with other organisms. Current Opinion in Plant Biology, 2011, 14, 347-350.	7.1	10
113	Heterologous Expression of Rhizobial CelC2 Cellulase Impairs Symbiotic Signaling and Nodulation in <i>Medicago truncatula</i>. Molecular Plant-Microbe Interactions, 2018, 31, 568-575.	2.6	9
114	Genetic dissection of bacterial speck disease resistance in tomato. Euphytica, 1994, 79, 195-200.	1.2	8
115	The Role of Diffusible Signals in the Establishment of Rhizobial and Mycorrhizal Symbioses. Signaling and Communication in Plants, 2012, , 1-30.	0.7	7
116	Symbiotic regulation: How plants seek salvation in starvation. Current Biology, 2022, 32, R46-R48.	3.9	4
117	Intergeneric Transfer and Functional Expression of the Tomato Disease Resistance Gene Pto. Plant Cell, 1995, 7, 1537.	6.6	3
118	Integrated Nod Factor Signaling in Plants. Signaling and Communication in Plants, 2009, , 71-90.	0.7	3
119	Fast Neutron Mutagenesis for Functional Genomics. , 0, , 291-305.		2
120	Giles Oldroyd. Current Biology, 2018, 28, R856-R857.	3.9	0
121	Callose-Regulated Symplastic Communication Coordinates Symbiotic Root Nodule Development. SSRN Electronic Journal, 0, , .	0.4	0