Liam Dolan

List of Publications by Year in Descending Order

151 papers	12,520 citations	54 h-index	111 g-index
232 ext. papers	15,119 ext. citations	10.1 avg, IF	6.4 L-index

#	Paper	IF	Citations
151	Loss of two families of SPX domain-containing proteins required for vacuolar polyphosphate accumulation coincides with the transition to phosphate storage in green plants. *Molecular Plant*, **2021**, 14, 838-846	14.4	7
150	Microtubule associated protein WAVE DAMPENED2-LIKE (WDL) controls microtubule bundling and the stability of the site of tip-growth in Marchantia polymorpha rhizoids. *PLoS Genetics*, **2021**, 17, e1009533	6	1
149	An evidence-based 3D reconstruction of , the most complex plant preserved from the Rhynie chert. *ELife*, **2021**, 10,	8.9	5
148	Fifteen compelling open questions in plant cell biology. *Plant Cell*, **2021**,	11.6	1
147	Multiple origins of dichotomous and lateral branching during root evolution. *Nature Plants*, **2020**, 6, 454-459	15.7	6
146	Plant Evolution: An Ancient Mechanism Protects Plants and Algae from Heat Stress. *Current Biology* , **2020**, 30, R277-R278	6.3	1
145	Multiple Metabolic Innovations and Losses Are Associated with Major Transitions in Land Plant Evolution. *Current Biology*, **2020**, 30, 1783-1800.e11	6.3	23
144	MpFEW RHIZOIDS1 miRNA-Mediated Lateral Inhibition Controls Rhizoid Cell Patterning in Marchantia polymorpha. *Current Biology*, **2020**, 30, 1905-1915.e4	6.3	5
143	Gene expression data support the hypothesis that Isoetes rootlets are true roots and not modified leaves. *Scientific Reports*, **2020**, 10, 21547	4.9	2
142	Neofunctionalisation of basic helix-loop-helix proteins occurred when embryophytes colonised the land. *New Phytologist*, **2019**, 223, 993-1008	9.8	9
141	Evolutionary and Functional Analysis of a Plasma Membrane H-ATPase. *Frontiers in Plant Science*, **2019**, 10, 1707	6.2	4
140	An Evolutionarily Conserved Receptor-like Kinases Signaling Module Controls Cell Wall Integrity During Tip Growth. *Current Biology*, **2019**, 29, 3899-3908.e3	6.3	12
139	Evolution: Diversification of Angiosperm Rooting Systems in the Early Cretaceous. *Current Biology*, **2019**, 29, R1081-R1083	6.3	6
138	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs. *PLoS Biology*, **2019**, 17, e3000560	9.7	17
137	Rhynie chert fossils demonstrate the independent origin and gradual evolution of lycophyte roots. *Current Opinion in Plant Biology*, **2019**, 47, 119-126	9.9	15
136	Identification of vacuolar phosphate efflux transporters in land plants. *Nature Plants*, **2019**, 5, 84-94	11.5	53
135	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		

134	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		
133	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		
132	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		
131	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		
130	A conserved regulatory mechanism mediates the convergent evolution of plant shoot lateral organs **2019**, 17, e3000560		
129	A mechanistic framework for auxin dependent Arabidopsis root hair elongation to low external phosphate. *Nature Communications*, **2018**, 9, 1409	17.4	79
128	Do longer root hairs improve phosphorus uptake? Testing the hypothesis with transgenic Brachypodium distachyon lines overexpressing endogenous RSL genes. *New Phytologist*, **2018**, 217, 1654-1666	9.8	30
127	History and contemporary significance of the Rhynie cherts-our earliest preserved terrestrial ecosystem. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	50
126	Bilaterally symmetric axes with rhizoids composed the rooting structure of the common ancestor of vascular plants. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	16
125	The Chara Genome: Secondary Complexity and Implications for Plant Terrestrialization. *Cell*, **2018**, 174, 448-464.e24	56.2	213
124	Stepwise and independent origins of roots among land plants. *Nature*, **2018**, 561, 235-238	50.4	56
123	Negative regulation of conserved class I bHLH transcription factors evolved independently among land plants. *ELife*, **2018**, 7,	8.9	10
122	Root Epidermal Development in Arabidopsis **2018**, 64-82		
121	PtdIns(3,5)P mediates root hair shank hardening in Arabidopsis. *Nature Plants*, **2018**, 4, 888-897	11.5	20
120	Patterns in Vegetative Development **2018**, 278-314		
119	Functional PTB phosphate transporters are present in streptophyte algae and early diverging land plants. *New Phytologist*, **2017**, 214, 1158-1171	9.8	12
118	Mp regulates air pore complex development in the liverwort. *Development (Cambridge)*, **2017**, 144, 1472-1476	4.8	15
117	The evolution of lycopsid rooting structures: conservatism and disparity. *New Phytologist*, **2017**, 215, 538-544	9.8	33

116	Root hair development in grasses and cereals (Poaceae). *Current Opinion in Genetics and Development*, **2017**, 45, 76-81	4.9	11
115	Insights into Land Plant Evolution Garnered from the Marchantia polymorpha Genome. *Cell*, **2017**, 171, 287-304.e15	56.2	538
114	RSL class I genes positively regulate root hair development in Oryza sativa. *New Phytologist*, **2017**, 213, 314-323	9.8	21
113	Diversification of a Transcription Factor Family Led to the Evolution of Antagonistically Acting Genetic Regulators of Root Hair Growth. *Current Biology*, **2016**, 26, 1622-1628	6.3	47
112	ROOT HAIR DEFECTIVE SIX-LIKE4 (RSL4) promotes root hair elongation by transcriptionally regulating the expression of genes required for cell growth. *New Phytologist*, **2016**, 212, 944-953	9.8	45
111	Growth regulation in tip-growing cells that develop on the epidermis. *Current Opinion in Plant Biology*, **2016**, 34, 77-83	9.9	16
110	The Mechanism Forming the Cell Surface of Tip-Growing Rooting Cells Is Conserved among Land Plants. *Current Biology*, **2016**, 26, 3238-3244	6.3	61
109	Unique Cellular Organization in the Oldest Root Meristem. *Current Biology*, **2016**, 26, 1629-1633	6.3	21
108	A Transcriptome Atlas of Physcomitrella patens Provides Insights into the Evolution and Development of Land Plants. *Molecular Plant*, **2016**, 9, 205-220	14.4	118
107	The Naming of Names: Guidelines for Gene Nomenclature in Marchantia. *Plant and Cell Physiology*, **2016**, 57, 257-61	4.9	38
106	RSL Class I Genes Controlled the Development of Epidermal Structures in the Common Ancestor of Land Plants. *Current Biology*, **2016**, 26, 93-9	6.3	64
105	ROOT HAIR DEFECTIVE SIX-LIKE Class I Genes Promote Root Hair Development in the Grass Brachypodium distachyon. *PLoS Genetics*, **2016**, 12, e1006211	6	30
104	Networks of highly branched stigmarian rootlets developed on the first giant trees. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 6695-700	11.5	39
103	Mapping of quantitative trait loci for root hair length in wheat identifies loci that co-locate with loci for yield components. *Journal of Experimental Botany*, **2016**, 67, 4535-43	7	22
102	The Stepwise Increase in the Number of Transcription Factor Families in the Precambrian Predated the Diversification of Plants On Land. *Molecular Biology and Evolution*, **2016**, 33, 2815-2819	8.3	46
101	Conserved regulatory mechanism controls the development of cells with rooting functions in land plants. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E3959-68	11.5	56
100	Intensity of a pulse of RSL4 transcription factor synthesis determines Arabidopsis root hair cell size. *Nature Plants*, **2015**, 1, 15138	11.5	56
99	Identification of reference genes for real-time quantitative PCR experiments in the liverwort Marchantia polymorpha. *PLoS ONE*, **2015**, 10, e0118678	3.7	40

98	Transcriptional profiling of Arabidopsis root hairs and pollen defines an apical cell growth signature. *BMC Plant Biology*, **2014**, 14, 197	5.3	40
97	Symmetric development: transcriptional regulation of symmetry transition in plants. *Current Biology*, **2014**, 24, R1172-4	6.3	1
96	Agriculture. Sustainable intensification in agriculture: premises and policies. *Science*, **2013**, 341, 33-4	33.3	957
95	Pointing PINs in the right directions: a potassium transporter is required for the polar localization of auxin efflux carriers. *New Phytologist*, **2013**, 197, 1027-1028	9.8	15
94	Recruitment and remodeling of an ancient gene regulatory network during land plant evolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 9571-6	11.5	88
93	The evolution of root hairs and rhizoids. *Annals of Botany*, **2012**, 110, 205-12	4.1	87
92	First plants cooled the Ordovician. *Nature Geoscience*, **2012**, 5, 86-89	18.3	200
91	Morphological evolution in land plants: new designs with old genes. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2012**, 367, 508-18	5.8	146
90	Endodermal cell-cell contact is required for the spatial control of Casparian band development in Arabidopsis thaliana. *Annals of Botany*, **2012**, 110, 361-71	4.1	26
89	Auxin promotes the transition from chloronema to caulonema in moss protonema by positively regulating PpRSL1and PpRSL2 in Physcomitrella patens. *New Phytologist*, **2011**, 192, 319-27	9.8	46
88	Root hair development involves asymmetric cell division in Brachypodium distachyon and symmetric division in Oryza sativa. *New Phytologist*, **2011**, 192, 601-10	9.8	35
87	Root hairs: development, growth and evolution at the plant-soil interface. *Plant and Soil*, **2011**, 346, 1-14	4.2	98
86	RSL genes are sufficient for rhizoid system development in early diverging land plants. *Development (Cambridge)*, **2011**, 138, 2273-81	6.6	68
85	A basic helix-loop-helix transcription factor controls cell growth and size in root hairs. *Nature Genetics*, **2010**, 42, 264-7	36.3	210
84	Origin and diversification of basic-helix-loop-helix proteins in plants. *Molecular Biology and Evolution*, **2010**, 27, 862-74	8.3	347
83	Early evolution of bHLH proteins in plants. *Plant Signaling and Behavior*, **2010**, 5, 911-2	2.5	33
82	SCHIZORIZA controls tissue system complexity in plants. *Current Biology*, **2010**, 20, 818-23	6.3	38
81	Body building on land: morphological evolution of land plants. *Current Opinion in Plant Biology*, **2009**, 12, 4-8	9.9	33

80	Meristems: the root of stem cell regulation. *Current Biology*, **2009**, 19, R459-60	6.3	6
79	Identification of the Arabidopsis dry2/sqe1-5 mutant reveals a central role for sterols in drought tolerance and regulation of reactive oxygen species. *Plant Journal*, **2009**, 59, 63-76	6.9	87
78	In situ analysis of gene expression in plants. *Methods in Molecular Biology*, **2009**, 513, 229-42	1.4	4
77	Reactive Oxygen Species in Growth and Development. *Signaling and Communication in Plants*, **2009**, 43-53		10
76	Chromatin and Arabidopsis root development. *Seminars in Cell and Developmental Biology*, **2008**, 19, 580-5	7.5	7
75	Plant evolution: TALES of development. *Cell*, **2008**, 133, 771-3	56.2	4
74	Local positive feedback regulation determines cell shape in root hair cells. *Science*, **2008**, 319, 1241-4	33.3	418
73	A mutual support mechanism through intercellular movement of CAPRICE and GLABRA3 can pattern the Arabidopsis root epidermis. *PLoS Biology*, **2008**, 6, e235	9.7	72
72	Proximal-distal patterns of transcription factor gene expression during Arabidopsis root development. *Journal of Experimental Botany*, **2008**, 59, 235-45	7	7
71	NADPH oxidase involvement in cellular integrity. *Planta*, **2008**, 227, 1415-8	4.7	30
70	Oxylipins produced by the 9-lipoxygenase pathway in Arabidopsis regulate lateral root development and defense responses through a specific signaling cascade. *Plant Cell*, **2007**, 19, 831-46	11.6	244
69	Ethylene modulates stem cell division in the Arabidopsis thaliana root. *Science*, **2007**, 317, 507-10	33.3	179
68	OsCSLD1, a cellulose synthase-like D1 gene, is required for root hair morphogenesis in rice. *Plant Physiology*, **2007**, 143, 1220-30	6.6	121
67	Plant science. SCARECROWs at the border. *Science*, **2007**, 316, 377-8	33.3	9
66	An ancient mechanism controls the development of cells with a rooting function in land plants. *Science*, **2007**, 316, 1477-80	33.3	303
65	Both chloronemal and caulonemal cells expand by tip growth in the moss Physcomitrella patens. *Journal of Experimental Botany*, **2007**, 58, 1843-9	7	96
64	A distant coilin homologue is required for the formation of cajal bodies in Arabidopsis. *Molecular Biology of the Cell*, **2006**, 17, 2942-51	3.5	93
63	Positional information and mobile transcriptional regulators determine cell pattern in the Arabidopsis root epidermis. *Journal of Experimental Botany*, **2006**, 57, 51-4	7	40

62	The role of reactive oxygen species in cell growth: lessons from root hairs. *Journal of Experimental Botany*, **2006**, 57, 1829-34	7	173
61	Control of plant development by reactive oxygen species. *Plant Physiology*, **2006**, 141, 341-5	6.6	389
60	A streamlined method for systematic, high resolution in situ analysis of mRNA distribution in plants. *Plant Methods*, **2005**, 1, 8	5.8	18
59	Three-dimensional modelling of wheat endosperm development. *New Phytologist*, **2005**, 168, 253-62	9.8	17
58	A RhoGDP dissociation inhibitor spatially regulates growth in root hair cells. *Nature*, **2005**, 438, 1013-6	50.4	276
57	Systematic spatial analysis of gene expression during wheat caryopsis development. *Plant Cell*, **2005**, 17, 2172-85	11.6	103
56	Potassium carrier TRH1 is required for auxin transport in Arabidopsis roots. *Plant Journal*, **2004**, 40, 523-35	6.9	155
55	Cell expansion in roots. *Current Opinion in Plant Biology*, **2004**, 7, 33-9	9.9	107
54	AKT1 and TRH1 are required during root hair elongation in Arabidopsis. *Journal of Experimental Botany*, **2003**, 54, 781-8	7	62
53	Reactive oxygen species produced by NADPH oxidase regulate plant cell growth. *Nature*, **2003**, 422, 442-6	50.4	1745
52	Epidermal patterning genes are active during embryogenesis in Arabidopsis. *Development (Cambridge)*, **2003**, 130, 2893-901	6.6	28
51	The Development of Cell Pattern in the Arabidopsis Root Epidermis **2003**, 129-137		
50	Galactose biosynthesis in Arabidopsis: genetic evidence for substrate channeling from UDP-D-galactose into cell wall polymers. *Current Biology*, **2002**, 12, 1840-5	6.3	129
49	Root development. *The Arabidopsis Book*, **2002**, 1, e0101	3	96
48	Building a hair: tip growth in Arabidopsis thaliana root hairs. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2002**, 357, 815-21	5.8	114
47	Cell specification in theArabidopsisroot epidermis requires the activity ofECTOPIC ROOT HAIR 3a katanin-p60 protein. *Development (Cambridge)*, **2002**, 129, 123-131	6.6	85
46	SCHIZORIZA controls an asymmetric cell division and restricts epidermal identity in the Arabidopsis root. *Development (Cambridge)*, **2002**, 129, 4327-4334	6.6	41
45	Cell biology and genetics of root hair formation in Arabidopsis thaliana. *Protoplasma*, **2001**, 215, 140-9	3.4	43

44	Plant development: the benefits of a change of scene. *Current Biology*, **2001**, 11, R702-4	6.3	1
43	Root patterning: SHORT ROOT on the move. *Current Biology*, **2001**, 11, R983-5	6.3	4
42	How and where to build a root hair. *Current Opinion in Plant Biology*, **2001**, 4, 550-4	9.9	37
41	Evolution and genetics of root hair stripes in the root epidermis. *Journal of Experimental Botany*, **2001**, 52, 413-7	7	72
40	TRH1 encodes a potassium transporter required for tip growth in Arabidopsis root hairs. *Plant Cell*, **2001**, 13, 139-51	11.6	242
39	KOJAK encodes a cellulose synthase-like protein required for root hair cell morphogenesis in Arabidopsis. *Genes and Development*, **2001**, 15, 79-89	12.6	188
38	Root Hairs as a Model System for Studying Plant Cell Growth. *Annals of Botany*, **2001**, 88, 1-7	4.1	46
37	The role of ethylene in root hair growth in Arabidopsis. *Journal of Plant Nutrition and Soil Science*, **2001**, 164, 141-145	2.3	61
36	Evolution and genetics of root hair stripes in the root epidermis. *Journal of Experimental Botany*, **2001**, 52, 413-417	7	29
35	The nucleus: a highly organized but dynamic structure. *Journal of Microscopy*, **2000**, 198, 199-207	1.9	19
34	Clonal analysis of the Arabidopsis root confirms that position, not lineage, determines cell fate. *Planta*, **2000**, 211, 191-9	4.7	128
33	Genetic Interactions during Root Hair Morphogenesis in Arabidopsis. *Plant Cell*, **2000**, 12, 1961	11.6	2
32	Genetic interactions during root hair morphogenesis in Arabidopsis. *Plant Cell*, **2000**, 12, 1961-74	11.6	191
31	Development of the root pole and cell patterning in Arabidopsis roots. *Current Opinion in Genetics and Development*, **2000**, 10, 405-9	4.9	21
30	The movement of coiled bodies visualized in living plant cells by the green fluorescent protein. *Molecular Biology of the Cell*, **1999**, 10, 2297-307	3.5	134
29	Differential ethylene sensitivity of epidermal cells is involved in the establishment of cell pattern in the Arabidopsis root. *Physiologia Plantarum*, **1999**, 106, 311-7	4.6	48
28	Signalling in cell type specification. *Seminars in Cell and Developmental Biology*, **1999**, 10, 149-56	7.5	8
27	Root Development in Arabidopsis **1999**, 133-144		

26	Positional information in root epidermis is defined during embryogenesis and acts in domains with strict boundaries. *Current Biology*, **1998**, 8, 421-30	6.3	146
25	TIP1 is required for both tip growth and non-tip growth in Arabidopsis. *New Phytologist*, **1998**, 138, 49-58	9.8	73
24	Root pattern: shooting in the dark?. *Seminars in Cell and Developmental Biology*, **1998**, 9, 201-6	7.5	14
23	Control of cell division in the root epidermis of Arabidopsis thaliana. *Developmental Biology*, **1998**, 194, 235-45	3.1	122
22	Stomata patterning on the hypocotyl of Arabidopsis thaliana is controlled by genes involved in the control of root epidermis patterning. *Developmental Biology*, **1998**, 194, 226-34	3.1	108
21	Pointing roots in the right direction: the role of auxin transport in response to gravity. *Genes and Development*, **1998**, 12, 2091-5	12.6	24
20	The ROOT HAIRLESS 1 gene encodes a nuclear protein required for root hair initiation in Arabidopsis. *Genes and Development*, **1998**, 12, 2013-21	12.6	50
19	A model system to study the effects of elevated CO2 on the developmental physiology of roots: the use of Arabidopsis thaliana. *Journal of Experimental Botany*, **1998**, 49, 593-597	7	29
18	The Okra leaf shape mutation in cotton is active in all cell layers of the leaf. *American Journal of Botany*, **1998**, 85, 322-327	2.7	17
17	Developmental regulation of pectic polysaccharides in the root meristem of Arabidopsis. *Journal of Experimental Botany*, **1997**, 48, 713-720	7	41
16	The role of ethylene in the development of plant form. *Journal of Experimental Botany*, **1997**, 48, 201-210	7	54
15	The COW1 locus of arabidopsis acts after RHD2, and in parallel with RHD3 and TIP1, to determine the shape, rate of elongation, and number of root hairs produced from each site of hair formation. *Plant Physiology*, **1997**, 115, 981-90	6.6	75
14	Scarecrow: Specifying asymmetric cell divisions throughout development. *Trends in Plant Science*, **1997**, 2, 1-2	13.1	16
13	The Arabidopsis Athb-10 (GLABRA2) is an HD-Zip protein required for regulation of root hair development. *Plant Journal*, **1996**, 10, 393-402	6.9	285
12	Ethylene is a positive regulator of root hair development in Arabidopsis thaliana. *Plant Journal*, **1995**, 8, 943-8	6.9	247
11	Secondary thickening in roots of Arabidopsis thaliana: anatomy and cell surface changes. *New Phytologist*, **1995**, 131, 121-128	9.8	80
10	An AGP epitope distinguishes a central metaxylem initial from other vascular initials in theArabidopsis root. *Protoplasma*, **1995**, 189, 149-155	3.4	46
9	Effects of elevated CO2 on cellular mechanisms, growth and development of trees with particular reference to hybrid poplar. *Forestry*, **1995**, 68, 379-390	2.2	13

8	Plant development: pulled up by the roots. *Current Opinion in Genetics and Development*, **1995**, 5, 432-8	4.9	22
7	Immunolabelling of cell surfaces of Arabidopsis thaliana roots following infection by Meloidogyne incognita (Nematoda). *Journal of Experimental Botany*, **1995**, 46, 1711-1720	7	18
6	Two ways to skin a plant: The analysis of root and shoot epidermal development in Arabidopsis. *BioEssays*, **1995**, 17, 865-872	4.1	10
5	Import of precursor proteins into Vicia faba mitochondria. *FEBS Letters*, **1988**, 236, 217-220	3.8	18
4	Root Epidermal Development in Arabidopsis64-82		1
3	Gene expression data support the hypothesis that Isoetes rootlets are true roots and not modified leaves		1
2	Extensive N4 Cytosine Methylation is Essential for Marchantia Sperm Function		4
1	Pattern in the Root Epidermis: An Interplay of Diffusible Signals and Cellular Geometry		9