Ben Scheres

List of Publications by Year
in descending order

141 papers	24,832 citations	8159 76 h-index	8599 146 g-index
158 all docs	158 docs citations	158 times ranked	12747 citing authors

#	Article	IF	Citations
1	The PIN auxin efflux facilitator network controls growth and patterning in Arabidopsis roots. Nature, 2005, 433, 39-44.	13.7	1,789
2	An Auxin-Dependent Distal Organizer of Pattern and Polarity in the Arabidopsis Root. Cell, 1999, 99, 463-472.	13.5	1,233
3	The PLETHORA Genes Mediate Patterning of the Arabidopsis Root Stem Cell Niche. Cell, 2004, 119, 109-120.	13.5	1,022
4	Conserved factors regulate signalling in ArabidopsisÂthaliana shoot and root stem cell organizers. Nature, 2007, 446, 811-814.	13.7	943
5	AtPIN4 Mediates Sink-Driven Auxin Gradients and Root Patterning in Arabidopsis. Cell, 2002, 108, 661-673.	13.5	763
6	Auxin transport is sufficient to generate a maximum and gradient guiding root growth. Nature, 2007, 449, 1008-1013.	13.7	761
7	Polar PIN Localization Directs Auxin Flow in Plants. Science, 2006, 312, 883-883.	6.0	754
8	PLETHORA proteins as dose-dependent master regulators of Arabidopsis root development. Nature, 2007, 449, 1053-1057.	13.7	743
9	Short-range control of cell differentiation in the Arabidopsis root meristem. Nature, 1997, 390, 287-289.	13.7	659
10	SCARECROW is involved in positioning the stem cell niche in the Arabidopsis root meristem. Genes and Development, 2003, 17, 354-358.	2.7	622
11	Cell fate in the Arabidopsis root meristem determined by directional signalling. Nature, 1995, 378, 62-65.	13.7	535
12	An Evolutionarily Conserved Mechanism Delimiting SHR Movement Defines a Single Layer of Endodermis in Plants. Science, 2007, 316, 421-425.	6.0	522
13	Auxin: The Looping Star in Plant Development. Annual Review of Plant Biology, 2008, 59, 443-465.	8.6	503
14	Dissection of Arabidopsis ADP-RIBOSYLATION FACTOR 1 Function in Epidermal Cell Polarity. Plant Cell, 2005, 17, 525-536.	3.1	422
15	Callose Biosynthesis Regulates Symplastic Trafficking during Root Development. Developmental Cell, 2011, 21, 1144-1155.	3.1	394
16	Arabidopsis Sterol Endocytosis Involves Actin-Mediated Trafficking via ARA6-Positive Early Endosomes. Current Biology, 2003, 13, 1378-1387.	1.8	390
17	A Mutually Inhibitory Interaction between Auxin and Cytokinin Specifies Vascular Pattern in Roots. Current Biology, 2011, 21, 917-926.	1.8	359
18	Root System Architecture from Coupling Cell Shape to Auxin Transport. PLoS Biology, 2008, 6, e307.	2.6	353

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19	The RETINOBLASTOMA-RELATED Gene Regulates Stem Cell Maintenance in Arabidopsis Roots. Cell, 2005, 123, 1337-1349.	13.5	336
20	PLETHORA gradient formation mechanism separates auxin responses. Nature, 2014, 515, 125-129.	13.7	329
21	Stem-cell niches: nursery rhymes across kingdoms. Nature Reviews Molecular Cell Biology, 2007, 8, 345-354.	16.1	323
22	A Molecular Framework for Plant Regeneration. Science, 2006, 311, 385-388.	6.0	312
23	The ENOD12 gene product is involved in the infection process during the pea-rhizobium interaction. Cell, 1990, 60, 281-294.	13.5	293
24	Lateral root formation and the multiple roles of auxin. Journal of Experimental Botany, 2018, 69, 155-167.	2.4	291
25	Whole-Genome Analysis of the SHORT-ROOT Developmental Pathway in Arabidopsis. PLoS Biology, 2006, 4, e143.	2.6	283
26	A Bistable Circuit Involving SCARECROW-RETINOBLASTOMA Integrates Cues to Inform Asymmetric Stem Cell Division. Cell, 2012, 150, 1002-1015.	13.5	273
27	Mosaic analyses using marked activation and deletion clones dissect Arabidopsis SCARECROW action in asymmetric cell division. Genes and Development, 2004, 18, 1964-1969.	2.7	271
28	Root-Specific CLE19 Overexpression and the sol1/2 Suppressors Implicate a CLV-like Pathway in the Control of Arabidopsis Root Meristem Maintenance. Current Biology, 2003, 13, 1435-1441.	1.8	269
29	Cell Polarity and PIN Protein Positioning in Arabidopsis Require STEROL METHYLTRANSFERASE1 Function. Plant Cell, 2003, 15, 612-625.	3.1	260
30	<i>Arabidopsis</i> JACKDAW and MAGPIE zinc finger proteins delimit asymmetric cell division and stabilize tissue boundaries by restricting SHORT-ROOT action. Genes and Development, 2007, 21, 2196-2204.	2.7	245
31	PLETHORA Genes Control Regeneration by a Two-Step Mechanism. Current Biology, 2015, 25, 1017-1030.	1.8	240
32	A Jasmonate Signaling Network Activates Root Stem Cells and Promotes Regeneration. Cell, 2019, 177, 942-956.e14.	13.5	233
33	Phloem-Transported Cytokinin Regulates Polar Auxin Transport and Maintains Vascular Pattern in the Root Meristem. Current Biology, 2011, 21, 927-932.	1.8	231
34	The NAC Domain Transcription Factors FEZ and SOMBRERO Control the Orientation of Cell Division Plane in Arabidopsis Root Stem Cells. Developmental Cell, 2008, 15, 913-922.	3.1	229
35	Generation of cell polarity in plants links endocytosis, auxin distribution and cell fate decisions. Nature, 2008, 456, 962-966.	13.7	228
36	Plasma membrane-bound AGC3 kinases phosphorylate PIN auxin carriers at TPRXS(N/S) motifs to direct apical PIN recycling. Development (Cambridge), 2010, 137, 3245-3255.	1.2	201

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37	ROP GTPase-Dependent Actin Microfilaments Promote PIN1 Polarization by Localized Inhibition of Clathrin-Dependent Endocytosis. PLoS Biology, 2012, 10, e1001299.	2.6	186
38	A ROP GTPase-Dependent Auxin Signaling Pathway Regulates the Subcellular Distribution of PIN2 in Arabidopsis Roots. Current Biology, 2012, 22, 1319-1325.	1.8	177
39	Members of the GCN5 Histone Acetyltransferase Complex Regulate PLETHORA-Mediated Root Stem Cell Niche Maintenance and Transit Amplifying Cell Proliferation in<i>Arabidopsis</i>Â. Plant Cell, 2009, 21, 1070-1079.	3.1	168
40	COP1 mediates the coordination of root and shoot growth by light through modulation of PIN1- and PIN2-dependent auxin transport in <i>Arabidopsis</i>. Development (Cambridge), 2012, 139, 3402-3412.	1.2	167
41	The Arabidopsis HOBBIT gene encodes a CDC27 homolog that links the plant cell cycle to progression of cell differentiation. Genes and Development, 2002, 16, 2566-2575.	2.7	166
42	SOMBRERO, BEARSKIN1, and BEARSKIN2 Regulate Root Cap Maturation in<i>Arabidopsis</i>Â Â. Plant Cell, 2010, 22, 640-654.	3.1	163
43	Root Development. The Arabidopsis Book, 2002, 1, e0101.	0.5	146
44	Plant neurobiology: no brain, no gain?. Trends in Plant Science, 2007, 12, 135-136.	4.3	146
45	Local auxin biosynthesis regulation by PLETHORA transcription factors controls phyllotaxis in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1107-1112.	3.3	146
46	<i>Arabidopsis</i>E2FA stimulates proliferation and endocycle separately through RBR-bound and RBR-free complexes. EMBO Journal, 2012, 31, 1480-1493.	3.5	142
47	In situ hybridization technique for mRNA detection in whole mount Arabidopsis samples. Nature Protocols, 2006, 1, 1939-1946.	5.5	141
48	Vectorial Information for Arabidopsis Planar Polarity Is Mediated by Combined AUX1, EIN2, and GNOM Activity. Current Biology, 2006, 16, 2143-2149.	1.8	141
49	Root development. Current Biology, 2000, 10, R813-R815.	1.8	138
50	A SCARECROW-RETINOBLASTOMA Protein Network Controls Protective Quiescence in the Arabidopsis Root Stem Cell Organizer. PLoS Biology, 2013, 11, e1001724.	2.6	137
51	Root Developmentâ€"Two Meristems for the Price of One?. Current Topics in Developmental Biology, 2010, 91, 67-102.	1.0	134
52	Cell Polarity Signaling in Arabidopsis Involves a BFA-Sensitive Auxin Influx Pathway. Current Biology, 2002, 12, 329-334.	1.8	131
53	Transcriptional control of tissue formation throughout root development. Science, 2015, 350, 426-430.	6.0	128
54	In vivo FRETâ€"FLIM reveals cell-type-specific protein interactions in Arabidopsis roots. Nature, 2017, 548, 97-102.	13.7	128

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55	The PLETHORA Gene Regulatory Network Guides Growth and Cell Differentiation in Arabidopsis Roots. Plant Cell, 2016, 28, 2937-2951.	3.1	127
56	Arabidopsis PLETHORA Transcription Factors Control Phyllotaxis. Current Biology, 2011, 21, 1123-1128.	1.8	124
57	The AUXIN BINDING PROTEIN 1 Is Required for Differential Auxin Responses Mediating Root Growth. PLoS ONE, 2009, 4, e6648.	1.1	124
58	Arabidopsis BIRD Zinc Finger Proteins Jointly Stabilize Tissue Boundaries by Confining the Cell Fate Regulator SHORT-ROOT and Contributing to Fate Specification. Plant Cell, 2015, 27, 1185-1199.	3.1	121
59	The plant perceptron connects environment to development. Nature, 2017, 543, 337-345.	13.7	120
60	JACKDAW controls epidermal patterning in the <i>Arabidopsis</i> root meristem through a non-cell-autonomous mechanism. Development (Cambridge), 2010, 137, 1523-1529.	1.2	119
61	MultiSite Gateway-Compatible Cell Type-Specific Gene-Inducible System for Plants. Plant Physiology, 2016, 170, 627-641.	2.3	119
62	ASYMMETRIC CELL DIVISION IN PLANTS. Annual Review of Plant Biology, 1999, 50, 505-537.	14.2	117
63	The Arabidopsis Anaphase-Promoting Complex or Cyclosome: Molecular and Genetic Characterization of the APC2 Subunit. Plant Cell, 2003, 15, 2370-2382.	3.1	117
64	A PHABULOSA/Cytokinin Feedback Loop Controls Root Growth in Arabidopsis. Current Biology, 2012, 22, 1699-1704.	1.8	112
65	Lateral root emergence in <i>Arabidopsis</i> is dependent on transcription factor LBD29 regulating auxin influx carrier <i>LAX3</i>. Development (Cambridge), 2016, 143, 3340-9.	1.2	111
66	Phyllotaxis and Rhizotaxis in Arabidopsis Are Modified by Three PLETHORA Transcription Factors. Current Biology, 2013, 23, 956-962.	1.8	105
67	Polar auxin transport: models and mechanisms. Development (Cambridge), 2013, 140, 2253-2268.	1.2	105
68	Time-lapse analysis of stem-cell divisions in theArabidopsis thalianaroot meristem. Plant Journal, 2006, 48, 619-627.	2.8	100
69	Root stem cell niche organizer specification by molecular convergence of PLETHORA and SCARECROW transcription factor modules. Genes and Development, 2018, 32, 1085-1100.	2.7	100
70	PLETHORA transcription factors orchestrate de novo organ patterning during <i>Arabidopsis</i> lateral root outgrowth. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11709-11714.	3.3	99
71	Repression of Apical Homeobox Genes Is Required for Embryonic Root Development in Arabidopsis. Current Biology, 2009, 19, 1485-1490.	1.8	97
72	Quantitative Phosphoproteomics after Auxin-stimulated Lateral Root Induction Identifies an SNX1 Protein Phosphorylation Site Required for Growth. Molecular and Cellular Proteomics, 2013, 12, 1158-1169.	2.5	95

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73	Probing the roles of LRR RLK genes in Arabidopsis thaliana roots using a custom T-DNA insertion set. Plant Molecular Biology, 2011, 76, 69-83.	2.0	90
74	Arabidopsis CULLIN3 Genes Regulate Primary Root Growth and Patterning by Ethylene-Dependent and -Independent Mechanisms. PLoS Genetics, 2009, 5, e1000328.	1.5	88
75	Irreversible fate commitment in the Arabidopsis stomatal lineage requires a FAMA and RETINOBLASTOMA-RELATED module. ELife, 2014, 3, .	2.8	86
76	Plant Cell Identity. The Role of Position and Lineage: Fig. 1.. Plant Physiology, 2001, 125, 112-114.	2.3	84
77	<i>Arabidopsis</i> RETINOBLASTOMA RELATED directly regulates DNA damage responses through functions beyond cell cycle control. EMBO Journal, 2017, 36, 1261-1278.	3.5	83
78	Mechanisms of Pattern Formation in Plant Embryogenesis. Annual Review of Genetics, 2004, 38, 587-614.	3.2	81
79	SCHIZORIZA Encodes a Nuclear Factor Regulating Asymmetry of Stem Cell Divisions in the Arabidopsis Root. Current Biology, 2010, 20, 452-457.	1.8	79
80	Root developmental programs shape the<i>Medicago truncatula</i>nodule meristem. Development (Cambridge), 2015, 142, 2941-50.	1.2	78
81	Specialization of CDC27 function in the <i>Arabidopsis thaliana</i> anaphaseâ€promoting complex (APC/C). Plant Journal, 2008, 53, 78-89.	2.8	74
82	The PsENOD12 Gene Is Expressed at Two Different Sites in Afghanistan Pea Pseudonodules Induced by Auxin Transport Inhibitors. Plant Physiology, 1992, 100, 1649-1655.	2.3	68
83	Non-cell-autonomous rescue of anaphase-promoting complex function revealed by mosaic analysis of HOBBIT, an Arabidopsis CDC27 homolog. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13250-13255.	3.3	62
84	Phosphorylation switch modulates the interdigitated pattern of PIN1 localization and cell expansion in Arabidopsis leaf epidermis. Cell Research, 2011, 21, 970-978.	5.7	62
85	A plant U-box protein, PUB4, regulates asymmetric cell division and cell proliferation in the root meristem. Development (Cambridge), 2015, 142, 444-453.	1.2	61
86	Cell-by-cell dissection of phloem development links a maturation gradient to cell specialization. Science, 2021, 374, eaba5531.	6.0	60
87	Precise control of plant stem cell activity through parallel regulatory inputs. Development (Cambridge), 2014, 141, 4055-4064.	1.2	59
88	A Plausible Microtubule-Based Mechanism for Cell Division Orientation in Plant Embryogenesis. Current Biology, 2018, 28, 3031-3043.e2.	1.8	57
89	<scp>SCARECROW</scp>â€<scp>LIKE</scp>23 and <scp>SCARECROW</scp> jointly specify endodermal cell fate but distinctly control <scp>SHORT</scp>â€<scp>ROOT</scp> movement. Plant Journal, 2015, 84, 773-784.	2.8	52
90	Cell polarity: ROPing the ends together. Current Opinion in Plant Biology, 2005, 8, 613-618.	3.5	51

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91	Cell fate and cell differentiation status in the Arabidopsis root. Planta, 1998, 205, 483-491.	1.6	50
92	Distinct Cell-Autonomous Functions of <i>RETINOBLASTOMA-RELATED</i> in <i>Arabidopsis</i> Stem Cells Revealed by the Brother of Brainbow Clonal Analysis System. Plant Cell, 2011, 23, 2581-2591.	3.1	49
93	RETINOBLASTOMA-RELATED Protein Stimulates Cell Differentiation in the<i>Arabidopsis</i>Root Meristem by Interacting with Cytokinin Signaling. Plant Cell, 2013, 25, 4469-4478.	3.1	46
94	Identification of factors required for meristem function in Arabidopsis using a novel next generation sequencing fast forward genetics approach. BMC Genomics, 2011, 12, 256.	1.2	45
95	Morphogengineering roots: comparing mechanisms of morphogen gradient formation. BMC Systems Biology, 2012, 6, 37.	3.0	45
96	Sequential Induction of Nodulin Gene Expression in the Developing Pea Nodule. Plant Cell, 1990, 2, 687.	3.1	44
97	The Arabidopsis root as a model to study plant development. Plant Physiology and Biochemistry, 1998, 36, 21-32.	2.8	41
98	Polar auxin transport and patterning: grow with the flow. Genes and Development, 2006, 20, 922-926.	2.7	41
99	Shootward and rootward: peak terminology for plant polarity. Trends in Plant Science, 2010, 15, 593-594.	4.3	39
100	A computational framework for cortical microtubule dynamics in realistically shaped plant cells. PLoS Computational Biology, 2018, 14, e1005959.	1.5	39
101	Apicalâ€"basal polarity: why plant cells don't standon their heads. Trends in Plant Science, 2006, 11, 12-14.	4.3	37
102	Nutrient computation for root architecture. Science, 2014, 346, 300-301.	6.0	36
103	A reflux-and-growth mechanism explains oscillatory patterning of lateral root branching sites. Developmental Cell, 2021, 56, 2176-2191.e10.	3.1	35
104	Coordination of growth in root and shoot apices by AIL/PLT transcription factors. Current Opinion in Plant Biology, 2018, 41, 95-101.	3.5	34
105	Back to the future: evolution of computational models in plant morphogenesis. Current Opinion in Plant Biology, 2009, 12, 606-614.	3.5	33
106	XYLEM NAC DOMAIN1, an angiosperm NAC transcription factor, inhibits xylem differentiation through conserved motifs that interact with RETINOBLASTOMAâ€RELATED. New Phytologist, 2017, 216, 76-89.	3.5	33
107	Gradient Expression of Transcription Factor Imposes a Boundary on Organ Regeneration Potential in Plants. Cell Reports, 2019, 29, 453-463.e3.	2.9	33
108	Experimental and genetic analysis of root development inArabidopsis thaliana. Plant and Soil, 1996, 187, 97-105.	1.8	31

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109	Isolation and characterization of an auxin-inducible glutathione S-transferase gene of Arabidopsis thaliana. Plant Molecular Biology, 1996, 30, 839-844.	2.0	31
110	CLASP-mediated cortical microtubule organization guides PIN polarization axis. Nature, 2013, 495, 529-533.	13.7	29
111	Mediator subunit MED31 is required for radial patterning of <i>Arabidopsis</i> roots. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E5624-E5633.	3.3	26
112	A coherent feed forward loop drives vascular regeneration in damaged aerial organs growing in normal developmental-context. Development (Cambridge), 2020, 147, .	1.2	24
113	Non-linear signaling for pattern formation?. Current Opinion in Plant Biology, 2000, 3, 412-417.	3.5	23
114	Optimizing FRET-FLIM Labeling Conditions to Detect Nuclear Protein Interactions at Native Expression Levels in Living Arabidopsis Roots. Frontiers in Plant Science, 2018, 9, 639.	1.7	21
115	The pea early nodulin gene PsENOD7 maps in the region of linkage group I containing sym2 and leghaemoglobin. Plant Molecular Biology, 1996, 31, 149-156.	2.0	20
116	Cell axiality and polarity in plants â€" adding pieces to the puzzle. Current Opinion in Plant Biology, 2001, 4, 520-526.	3.5	19
117	The logic of communication: roles for mobile transcription factors in plants. Journal of Experimental Botany, 2015, 66, 1133-1144.	2.4	19
118	Root pattern: Shooting in the dark?. Seminars in Cell and Developmental Biology, 1998, 9, 201-206.	2.3	18
119	5 Digging out Roots: Pattern Formation, Cell Division, and Morphogenesis in Plants. Current Topics in Developmental Biology, 1999, 45, 207-247.	1.0	18
120	Plant Patterning: TRY to Inhibit Your Neighbors. Current Biology, 2002, 12, R804-R806.	1.8	18
121	Plant Asymmetric Cell Division, Vive la DiffÃ©rence!. Cell, 2009, 137, 1189-1192.	13.5	18
122	Root development: New meanings for root canals?. Current Opinion in Plant Biology, 1998, 1, 32-36.	3.5	17
123	Cell signaling in root development. Current Opinion in Genetics and Development, 1997, 7, 501-506.	1.5	16
124	Geometric cues forecast the switch from twoâ€•to threeâ€dimensional growth in Physcomitrella patens. New Phytologist, 2020, 225, 1945-1955.	3.5	16
125	Topology of regulatory networks that guide plant meristem activity: similarities and differences. Current Opinion in Plant Biology, 2019, 51, 74-80.	3.5	15
126	ErbB-3 BINDING PROTEIN 1 Regulates Translation and Counteracts RETINOBLASTOMA RELATED to Maintain the Root Meristem. Plant Physiology, 2020, 182, 919-932.	2.3	10

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127	Root patterning: it takes two to tangle. Journal of Experimental Botany, 2016, 67, 1201-1203.	2.4	8
128	Analysis of a Plant Transcriptional Regulatory Network Using Transient Expression Systems. Methods in Molecular Biology, 2017, 1629, 83-103.	0.4	8
129	Root genomics: towards digital in situ hybridization. Genome Biology, 2004, 5, 227.	13.9	7
130	A LEAFY link from outer space. Nature, 1998, 395, 545-547.	13.7	6
131	The force from without. Nature, 2007, 446, 151-152.	13.7	6
132	Roots respond to an inner calling. Nature, 2010, 465, 299-300.	13.7	6
133	Joining forces: feedback and integration in plant development. Current Opinion in Genetics and Development, 2011, 21, 799-805.	1.5	6
134	Early Nodulins in Pea and Soybean Nodule Development. Current Plant Science and Biotechnology in Agriculture, 1991, , 300-303.	0.0	5
135	Rooting plant development. Development (Cambridge), 2013, 140, 939-941.	1.2	4
136	Embryo-patterning genes and reinforcement cues determine cell fate in theArabidopsis thalianaroot. Seminars in Cell and Developmental Biology, 1996, 7, 857-865.	2.3	3
137	Plant cell biologyâ€"get your networks together. Current Opinion in Plant Biology, 2007, 10, 546-548.	3.5	2
138	Arabidopsis as a Model for Systems Biology. , 2013, , 391-406.		2
139	Tuning Division and Differentiation in Stomata: How to Silence a MUTE. Developmental Cell, 2018, 45, 282-283.	3.1	1
140	Gradient Expression of Transcription Factor Imposes a Boundary on Organ Regenerative Potential in Plant. SSRN Electronic Journal, 0, , .	0.4	1
141	Playing with Arabidopsis. Plant Physiology, 2001, 126, 468-470.	2.3	0