Elliot M Meyerowitz

List of Publications by Year
in descending order

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130 papers	29,445 citations	7551 77 h-index	15683 125 g-index
143 all docs	143 docs citations	143 times ranked	16159 citing authors

#	Article	IF	Citations
1	The war of the whorls: genetic interactions controlling flower development. Nature, 1991, 353, 31-37.	13.7	2,752
2	The protein encoded by the Arabidopsis homeotic gene agamous resembles transcription factors. Nature, 1990, 346, 35-39.	13.7	1,643
3	LEAFY controls floral meristem identity in Arabidopsis. Cell, 1992, 69, 843-859.	13.5	1,442
4	Signaling of Cell Fate Decisions by CLAVATA3 in Arabidopsis Shoot Meristems. Science, 1999, 283, 1911-1914.	6.0	1,214
5	Patterns of Auxin Transport and Gene Expression during Primordium Development Revealed by Live Imaging of the Arabidopsis Inflorescence Meristem. Current Biology, 2005, 15, 1899-1911.	1.8	1,071
6	Dependence of Stem Cell Fate in Arabidopsis on a Feedback Loop Regulated by CLV3 Activity. Science, 2000, 289, 617-619.	6.0	1,021
7	The homeotic gene APETALA3 of Arabidopsis thaliana encodes a MADS box and is expressed in petals and stamens. Cell, 1992, 68, 683-697.	13.5	934
8	Developmental Patterning by Mechanical Signals in <i>Arabidopsis</i>. Science, 2008, 322, 1650-1655.	6.0	795
9	A Polycomb-group gene regulates homeotic gene expression in Arabidopsis. Nature, 1997, 386, 44-51.	13.7	760
10	Antagonistic Regulation of PIN Phosphorylation by PP2A and PINOID Directs Auxin Flux. Cell, 2007, 130, 1044-1056.	13.5	590
11	An auxin-driven polarized transport model for phyllotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1633-1638.	3.3	558
12	EIN4 and ERS2 Are Members of the Putative Ethylene Receptor Gene Family in Arabidopsis. Plant Cell, 1998, 10, 1321-1332.	3.1	546
13	A Homolog of NO APICAL MERISTEM Is an Immediate Target of the Floral Homeotic Genes APETALA3/PISTILLATA. Cell, 1998, 92, 93-103.	13.5	540
14	Arabidopsis Regeneration from Multiple Tissues Occurs via a Root Development Pathway. Developmental Cell, 2010, 18, 463-471.	3.1	502
15	Multiple feedback loops through cytokinin signaling control stem cell number within the <i>Arabidopsis</i> shoot meristem. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16529-16534.	3.3	474
16	Orchestration of Floral Initiation by APETALA1. Science, 2010, 328, 85-89.	6.0	454
17	Transcriptional Activation of APETALA1 by LEAFY. Science, 1999, 285, 582-584.	6.0	447
18	Role of SUPERMAN in maintaining Arabidopsis floral whorl boundaries. Nature, 1995, 378, 199-203.	13.7	437

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19	SPLAYED, a Novel SWI/SNF ATPase Homolog, Controls Reproductive Development in Arabidopsis. Current Biology, 2002, 12, 85-94.	1.8	424
20	HypermethylatedSUPERMANEpigenetic Alleles inArabidopsis. Science, 1997, 277, 1100-1103.	6.0	422
21	Observing the cell in its native state: Imaging subcellular dynamics in multicellular organisms. Science, 2018, 360, .	6.0	420
22	Alignment between PIN1 Polarity and Microtubule Orientation in the Shoot Apical Meristem Reveals a Tight Coupling between Morphogenesis and Auxin Transport. PLoS Biology, 2010, 8, e1000516.	2.6	392
23	Genetic Control of Cell Division Patterns in Developing Plants. Cell, 1997, 88, 299-308.	13.5	355
24	Subcellular and supracellular mechanical stress prescribes cytoskeleton behavior in Arabidopsis cotyledon pavement cells. ELife, 2014, 3, e01967.	2.8	323
25	Pattern formation during de novo assembly of the<i>Arabidopsis</i>shoot meristem. Development (Cambridge), 2007, 134, 3539-3548.	1.2	320
26	Real-time lineage analysis reveals oriented cell divisions associated with morphogenesis at the shoot apex of Arabidopsis thaliana. Development (Cambridge), 2004, 131, 4225-4237.	1.2	299
27	A dominant mutant receptor from Arabidopsis confers ethylene insensitivity in heterologous plants. Nature Biotechnology, 1997, 15, 444-447.	9.4	295
28	The homeotic protein AGAMOUS controls microsporogenesis by regulation of SPOROCYTELESS. Nature, 2004, 430, 356-360.	13.7	284
29	Characterization of the genome of Arabidopsis thaliana. Journal of Molecular Biology, 1986, 187, 169-183.	2.0	277
30	The DNA of Arabidopsis thaliana. Molecular Genetics and Genomics, 1984, 194, 15-23.	2.4	273
31	Two MscS Homologs Provide Mechanosensitive Channel Activities in the Arabidopsis Root. Current Biology, 2008, 18, 730-734.	1.8	265
32	Plants Compared to Animals: The Broadest Comparative Study of Development. Science, 2002, 295, 1482-1485.	6.0	261
33	Floral homeotic genes are targets of gibberellin signaling in flower development. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7827-7832.	3.3	249
34	Repression of AGAMOUS-LIKE 24 is a crucial step in promoting flower development. Nature Genetics, 2004, 36, 157-161.	9.4	249
35	Stem-Cell Homeostasis and Growth Dynamics Can Be Uncoupled in the Arabidopsis Shoot Apex. Science, 2005, 310, 663-667.	6.0	240
36	PLETHORA Genes Control Regeneration by a Two-Step Mechanism. Current Biology, 2015, 25, 1017-1030.	1.8	240

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37	The Arabidopsis JAGGED gene encodes a zinc finger protein that promotes leaf tissue development. Development (Cambridge), 2004, 131, 1111-1122.	1.2	230
38	Genes Directing Flower Development in Arabidopsis. Plant Cell, 1989, 1, 37.	3.1	228
39	Control of plant stem cell function by conserved interacting transcriptional regulators. Nature, 2015, 517, 377-380.	13.7	224
40	Genome-Wide Analysis of Spatial Gene Expression in Arabidopsis Flowers[W]. Plant Cell, 2004, 16, 1314-1326.	3.1	218
41	A Developmental Framework for Graft Formation and Vascular Reconnection in Arabidopsis thaliana. Current Biology, 2015, 25, 1306-1318.	1.8	218
42	Pectin homogalacturonan nanofilament expansion drives morphogenesis in plant epidermal cells. Science, 2020, 367, 1003-1007.	6.0	209
43	Cytokinin signaling as a positional cue for patterning the apicalâ€“basal axis of the growing <i>Arabidopsis</i> shoot meristem. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4002-4007.	3.3	200
44	Genome-Wide Analysis of Gene Expression during Early Arabidopsis Flower Development. PLoS Genetics, 2006, 2, e117.	1.5	192
45	50Âyears of Arabidopsis research: highlights and future directions. New Phytologist, 2016, 209, 921-944.	3.5	186
46	The Homeotic Protein AGAMOUS Controls Late Stamen Development by Regulating a Jasmonate Biosynthetic Gene in<i>Arabidopsis</i>. Plant Cell, 2007, 19, 3516-3529.	3.1	182
47	Overexpression of a Gene Encoding a Cytochrome P450, CYP78A9, Induces Large and Seedless Fruit in Arabidopsis. Plant Cell, 2000, 12, 1541-1550.	3.1	172
48	Plant grafting. Current Biology, 2015, 25, R183-R188.	1.8	170
49	The Stem Cell Niche in Leaf Axils Is Established by Auxin and Cytokinin in <i>Arabidopsis</i>. Plant Cell, 2014, 26, 2055-2067.	3.1	165
50	Cell size and growth regulation in the <i>Arabidopsis thaliana</i> apical stem cell niche. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E8238-E8246.	3.3	162
51	Cellâ€type specific analysis of translating RNAs in developing flowers reveals new levels of control. Molecular Systems Biology, 2010, 6, 419.	3.2	155
52	The ABC model of flower development: then and now. Development (Cambridge), 2012, 139, 4095-4098.	1.2	147
53	Physical Forces Regulate Plant Development and Morphogenesis. Current Biology, 2014, 24, R475-R483.	1.8	146
54	Modeling the organization of the WUSCHEL expression domain in the shoot apical meristem. Bioinformatics, 2005, 21, i232-i240.	1.8	145

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55	HAIRY MERISTEM with WUSCHEL confines CLAVATA3 expression to the outer apical meristem layers. Science, 2018, 361, 502-506.	6.0	137
56	A genetic and molecular model for flower development in <i>Arabidopsis thaliana</i>. Development (Cambridge), 1991, 113, 157-167.	1.2	136
57	The evolution fo rhodopsins and neurotransmitter receptors. Journal of Molecular Evolution, 1991, 33, 367-378.	0.8	134
58	Nitrate modulates stem cell dynamics in <i>Arabidopsis</i> shoot meristems through cytokinins. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1382-1387.	3.3	134
59	Plant stem cell maintenance by transcriptional cross-regulation of related receptor kinases. Development (Cambridge), 2015, 142, 1043-1049.	1.2	131
60	Plant Stem Cell Signaling Involves Ligand-Dependent Trafficking of the CLAVATA1 Receptor Kinase. Current Biology, 2011, 21, 345-352.	1.8	127
61	Transcriptome dynamics at <i>Arabidopsis</i> graft junctions reveal an intertissue recognition mechanism that activates vascular regeneration. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2447-E2456.	3.3	124
62	An integrated genetic/RFLP map of theArabidopsis thalianagenome. Plant Journal, 1993, 3, 745-754.	2.8	123
63	Transcription Repressor HANABA TARANU Controls Flower Development by Integrating the Actions of Multiple Hormones, Floral Organ Specification Genes, and GATA3 Family Genes in<i>Arabidopsis</i>Â. Plant Cell, 2013, 25, 83-101.	3.1	121
64	Global Expression Profiling Applied to the Analysis of Arabidopsis Stamen Development. Plant Physiology, 2007, 145, 747-762.	2.3	117
65	Cellerator: extending a computer algebra system to include biochemical arrows for signal transduction simulations. Bioinformatics, 2003, 19, 677-678.	1.8	116
66	An epidermis-driven mechanism positions and scales stem cell niches in plants. Science Advances, 2016, 2, e1500989.	4.7	109
67	Cell type boundaries organize plant development. ELife, 2017, 6, .	2.8	106
68	The Impact of Arabidopsis on Human Health: Diversifying Our Portfolio. Cell, 2008, 133, 939-943.	13.5	101
69	Regulation of SUP Expression Identifies Multiple Regulators Involved in Arabidopsis Floral Meristem Development. Plant Cell, 2000, 12, 1607-1618.	3.1	99
70	Field Guide to Plant Model Systems. Cell, 2016, 167, 325-339.	13.5	99
71	A gene expression map of shoot domains reveals regulatory mechanisms. Nature Communications, 2019, 10, 141.	5.8	96
72	Cell cycle regulates cell type in the<i>Arabidopsis</i>sepal. Development (Cambridge), 2012, 139, 4416-4427.	1.2	92

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73	Regulation of Meristem Morphogenesis by Cell Wall Synthases in Arabidopsis. Current Biology, 2016, 26, 1404-1415.	1.8	89
74	Auxin depletion from leaf primordia contributes to organ patterning. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 18769-18774.	3.3	88
75	Whorl-Specific Expression of the SUPERMAN Gene of Arabidopsis Is Mediated by cis Elements in the Transcribed Region. Current Biology, 2003, 13, 1524-1530.	1.8	86
76	<scp>SUPERMAN</scp> regulates floral whorl boundaries through control of auxin biosynthesis. EMBO Journal, 2018, 37, .	3.5	85
77	Transformation of shoots into roots in<i>Arabidopsis</i>embryos mutant at the<i>TOPLESS</i>locus. Development (Cambridge), 2002, 129, 2797-2806.	1.2	85
78	Floral stem cell termination involves the direct regulation of<i>AGAMOUS</i>by PERIANTHIA. Development (Cambridge), 2009, 136, 1605-1611.	1.2	84
79	Molecular mechanism of cytokinin-activated cell division in <i>Arabidopsis</i>. Science, 2021, 371, 1350-1355.	6.0	79
80	Analysis of cell division patterns in the <i>Arabidopsis</i> shoot apical meristem. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4815-4820.	3.3	78
81	Computational morphodynamics of plants: integrating development over space and time. Nature Reviews Molecular Cell Biology, 2011, 12, 265-273.	16.1	74
82	<i>SUPERMAN</i> prevents class B gene expression and promotes stem cell termination in the fourth whorl of <i>Arabidopsis thaliana</i> flowers. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7166-7171.	3.3	74
83	LEAFY Controls Auxin Response Pathways in Floral Primordium Formation. Science Signaling, 2013, 6, ra23.	1.6	69
84	Site specificity of the Arabidopsis METI DNA methyltransferase demonstrated through hypermethylation of the superman locus. Plant Molecular Biology, 2001, 46, 171-183.	2.0	67
85	The self-organization of plant microtubules inside the cell volume yields their cortical localization, stable alignment, and sensitivity to external cues. PLoS Computational Biology, 2018, 14, e1006011.	1.5	67
86	Prehistory and History of Arabidopsis Research. Plant Physiology, 2001, 125, 15-19.	2.3	65
87	Transcriptome-Wide Analysis of Uncapped mRNAs in <i>Arabidopsis</i> Reveals Regulation of mRNA Degradation. Plant Cell, 2008, 20, 2571-2585.	3.1	64
88	Primed histone demethylation regulates shoot regenerative competency. Nature Communications, 2019, 10, 1786.	5.8	52
89	Calcium signals are necessary to establish auxin transporter polarity in a plant stem cell niche. Nature Communications, 2019, 10, 726.	5.8	51
90	Temperature-Sensitive Splicing in the Floral Homeotic Mutant apetala3-1. Plant Cell, 1998, 10, 1453-1463.	3.1	50

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91	Live confocal imaging of Arabidopsis flower buds. Developmental Biology, 2016, 419, 114-120.	0.9	48
92	Targeted misexpression of AGAMOUS in whorl 2 of Arabidopsis flowers. Plant Journal, 1997, 11, 825-839.	2.8	45
93	Floral induction in tissue culture: a system for the analysis of LEAFY-dependent gene regulation. Plant Journal, 2004, 39, 273-282.	2.8	45
94	Cell Cycle Control by Nuclear Sequestration of CDC20 and CDH1 mRNA in Plant Stem Cells. Molecular Cell, 2017, 68, 1108-1119.e3.	4.5	45
95	ETR1 Integrates Response to Ethylene and Cytokinins into a Single Multistep Phosphorelay Pathway to Control Root Growth. Molecular Plant, 2019, 12, 1338-1352.	3.9	43
96	Unravelling developmental dynamics: transient intervention and live imaging in plants. Nature Reviews Molecular Cell Biology, 2007, 8, 491-501.	16.1	42
97	CNN-Based Preprocessing to Optimize Watershed-Based Cell Segmentation in 3D Confocal Microscopy Images. , 2019, , .		37
98	Cytoskeletal organization in isolated plant cells under geometry control. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17399-17408.	3.3	37
99	A multiscale analysis of early flower development in Arabidopsis provides an integrated view of molecular regulation and growth control. Developmental Cell, 2021, 56, 540-556.e8.	3.1	37
100	LETHAL MUTATIONS FLANKING THE 68C GLUE GENE CLUSTER ON CHROMOSOME 3 OF DROSOPHILA MELANOGASTER. Genetics, 1986, 112, 785-802.	1.2	37
101	Primary wall cellulose synthase regulates shoot apical meristem mechanics and growth. Development (Cambridge), 2019, 146, .	1.2	36
102	The Shoot Apical Meristem Regulatory Peptide CLV3 Does Not Activate Innate Immunity. Plant Cell, 2012, 24, 3186-3192.	3.1	35
103	Structure of the Bacterial Cellulose Ribbon and Its Assembly-Guiding Cytoskeleton by Electron Cryotomography. Journal of Bacteriology, 2021, 203, .	1.0	31
104	Introduction to the <i>Arabidopsis</i> genome. , 1992, , 100-118.		30
105	Cryo-electron tomography of the onion cell wall shows bimodally oriented cellulose fibers and reticulated homogalacturonan networks. Current Biology, 2022, 32, 2375-2389.e6.	1.8	29
106	A Genetic Screen for Modifiers of UFO Meristem Activity Identifies Three Novel FUSED FLORAL ORGANS Genes Required for Early Flower Development in Arabidopsis. Genetics, 1998, 149, 579-595.	1.2	27
107	Flower Development: Open Questions and Future Directions. Methods in Molecular Biology, 2014, 1110, 103-124.	0.4	26
108	Genetic and molecular mechanisms of pattern formation inArabidopsis flower development. Journal of Plant Research, 1998, 111, 233-242.	1.2	24

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109	Arabidopsis Thaliana: A Model System for Plant Molecular Biology. Nature Biotechnology, 1987, 5, 1177-1181.	9.4	22
110	Today we have naming of parts. Nature, 1999, 402, 731-732.	13.7	22
111	The Overlapping and Distinct Roles of HAM Family Genes in Arabidopsis Shoot Meristems. Frontiers in Plant Science, 2020, 11, 541968.	1.7	22
112	Use of the APETALA1 promoter to assay the in vivo function of chimeric MADS box genes. Sexual Plant Reproduction, 1999, 12, 14-26.	2.2	21
113	Minimal regions in the Arabidopsis PISTILLATA promoter responsive to the APETALA3 / PISTILLATA feedback control do not contain a CArG box. Sexual Plant Reproduction, 2000, 13, 85-94.	2.2	21
114	Cell segmentation in 3D confocal images using supervoxel merge-forests with CNN-based hypothesis selection. , 2018, , .		18
115	Is cell polarity under mechanical control in plants?. Plant Signaling and Behavior, 2011, 6, 137-139.	1.2	15
116	Computational Analysis of Live Cell Images of the Arabidopsis thaliana Plant. Methods in Cell Biology, 2012, 110, 285-323.	0.5	13
117	Genetics and plant development. Comptes Rendus - Biologies, 2016, 339, 240-246.	0.1	13
118	Visualization of Protein Coding, Long Noncoding, and Nuclear RNAs by Fluorescence in Situ Hybridization in Sections of Shoot Apical Meristems and Developing Flowers. Plant Physiology, 2020, 182, 147-158.	2.3	13
119	COP1 patrols the night beat. Nature Cell Biology, 2000, 2, E102-E104.	4.6	10
120	A 3-dimensional fibre scaffold as an investigative tool for studying the morphogenesis of isolated plant cells. BMC Plant Biology, 2015, 15, 211.	1.6	9
121	Plant developmental biology: Green genes for the 21st century. BioEssays, 1994, 16, 621-625.	1.2	8
122	Switching on Flowers: Transient LEAFY Induction Reveals Novel Aspects of the Regulation of Reproductive Development in Arabidopsis. Frontiers in Plant Science, 2011, 2, 60.	1.7	8
123	Molecular cloning approach for a putative ethylene receptor gene in Arabidopsis. Biochemical Society Transactions, 1992, 20, 73-75.	1.6	7
124	SEGMENT3D: A web-based application for collaborative segmentation of 3D images used in the shoot apical meristem. , 2018, , .		6
125	Mosaic evolution in theDrosophila genome. BioEssays, 1988, 9, 65-69.	1.2	5
126	Genetic and physical characterization of a region of Arabidopsis chromosome 1 containing the CLAVATA1 gene. Plant Molecular Biology, 1999, 39, 171-176.	2.0	5

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127	Abnormal developments. Nature, 1991, 353, 385-386.	13.7	3
128	An integrated genetic/RFLP map of the Arabidopsis thaliana genome. , 1993, 3, 745.		2
129	Real-Time Lineage Analysis to Study Cell Division Orientation in the Arabidopsis Shoot Meristem. Methods in Molecular Biology, 2016, 1370, 147-167.	0.4	2
130	Mutually reinforcing patterning mechanisms: authors' reply. Nature Reviews Molecular Cell Biology, 2011, 12, 533-533.	16.1	1