Sean R Cutler

List of Publications by Year
in descending order

75 papers	14,549 citations	53660 45 h-index	85405 71 g-index
79 all docs	79 docs citations	79 times ranked	11103 citing authors

#	Article	IF	Citations
1	Abscisic Acid: Emergence of a Core Signaling Network. Annual Review of Plant Biology, 2010, 61, 651-679.	8.6	2,506
2	Abscisic Acid Inhibits Type 2C Protein Phosphatases via the PYR/PYL Family of START Proteins. Science, 2009, 324, 1068-1071.	6.0	2,385
3	In vitro reconstitution of an abscisic acid signalling pathway. Nature, 2009, 462, 660-664.	13.7	1,113
4	A gateâ€“latchâ€“lock mechanism for hormone signalling by abscisic acid receptors. Nature, 2009, 462, 602-608.	13.7	608
5	Regulation of Abscisic Acid Signaling by the Ethylene Response Pathway in Arabidopsis. Plant Cell, 2000, 12, 1117-1126.	3.1	507
6	The irregular xylem3 Locus of Arabidopsis Encodes a Cellulose Synthase Required for Secondary Cell Wall Synthesis. Plant Cell, 1999, 11, 769-779.	3.1	492
7	Modulation of drought resistance by the abscisic acid receptor PYL5 through inhibition of cladeâ€ƒA PP2Cs. Plant Journal, 2009, 60, 575-588.	2.8	476
8	The abscisic acid receptor PYR1 in complex with abscisic acid. Nature, 2009, 462, 665-668.	13.7	457
9	Structural Mechanism of Abscisic Acid Binding and Signaling by Dimeric PYR1. Science, 2009, 326, 1373-1379.	6.0	457
10	PYR/PYL/RCAR family members are major<i>inâ€vivo</i>ABI1 protein phosphatase 2Câ€interacting proteins in Arabidopsis. Plant Journal, 2010, 61, 290-299.	2.8	451
11	Molecular Mimicry Regulates ABA Signaling by SnRK2 Kinases and PP2C Phosphatases. Science, 2012, 335, 85-88.	6.0	439
12	A small-molecule screen in C. elegans yields a new calcium channel antagonist. Nature, 2006, 441, 91-95.	13.7	263
13	Activation of dimeric ABA receptors elicits guard cell closure, ABA-regulated gene expression, and drought tolerance. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12132-12137.	3.3	262
14	Structural and functional insights into core ABA signaling. Current Opinion in Plant Biology, 2010, 13, 495-502.	3.5	234
15	Agrochemical control of plant water use using engineered abscisic acid receptors. Nature, 2015, 520, 545-548.	13.7	217
16	Tuning water-use efficiency and drought tolerance in wheat using abscisic acid receptors. Nature Plants, 2019, 5, 153-159.	4.7	203
17	50Âyears of Arabidopsis research: highlights and future directions. New Phytologist, 2016, 209, 921-944.	3.5	186
18	Tomato PYR/PYL/RCAR abscisic acid receptors show high expression in root, differential sensitivity to the abscisic acid agonist quinabactin, and the capability to enhance plant drought resistance. Journal of Experimental Botany, 2014, 65, 4451-4464.	2.4	173

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19	A predictive model for drug bioaccumulation and bioactivity in Caenorhabditis elegans. Nature Chemical Biology, 2010, 6, 549-557.	3.9	164
20	Caenorhabditis elegans is a useful model for anthelmintic discovery. Nature Communications, 2015, 6, 7485.	5.8	163
21	A thermodynamic switch modulates abscisic acid receptor sensitivity. EMBO Journal, 2011, 30, 4171-4184.	3.5	161
22	Morlin, an inhibitor of cortical microtubule dynamics and cellulose synthase movement. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5854-5859.	3.3	149
23	Identification and mechanism of ABA receptor antagonism. Nature Structural and Molecular Biology, 2010, 17, 1102-1108.	3.6	145
24	Arabidopsis P-Glycoprotein19 Participates in the Inhibition of Gravitropism by Gravacin. Chemistry and Biology, 2007, 14, 1366-1376.	6.2	128
25	High-throughput screening of small molecules for bioactivity and target identification in Caenorhabditis elegans. Nature Protocols, 2006, 1, 1906-1914.	5.5	110
26	A Mesoscale Abscisic Acid Hormone Interactome Reveals a Dynamic Signaling Landscape in Arabidopsis. Developmental Cell, 2014, 29, 360-372.	3.1	109
27	Dynamic control of plant water use using designed ABA receptor agonists. Science, 2019, 366, .	6.0	107
28	Where are the drought tolerant crops? An assessment of more than two decades of plant biotechnology effort in crop improvement. Plant Science, 2018, 273, 110-119.	1.7	106
29	Elucidating the Germination Transcriptional Program Using Small Molecules Â Â. Plant Physiology, 2008, 147, 143-155.	2.3	104
30	Structural basis for selective activation of ABA receptors. Nature Structural and Molecular Biology, 2010, 17, 1109-1113.	3.6	104
31	Modulation of Abscisic Acid Signaling in Vivo by an Engineered Receptor-Insensitive Protein Phosphatase Type 2C Allele Â Â. Plant Physiology, 2011, 156, 106-116.	2.3	104
32	Chemical genetic interrogation of natural variation uncovers a molecule that is glycoactivated. Nature Chemical Biology, 2007, 3, 716-721.	3.9	103
33	Designed abscisic acid analogs as antagonists of PYL-PP2C receptor interactions. Nature Chemical Biology, 2014, 10, 477-482.	3.9	98
34	Plant Nuclear Hormone Receptors: A Role for Small Molecules in Protein-Protein Interactions. Annual Review of Cell and Developmental Biology, 2010, 26, 445-469.	4.0	93
35	Potent and selective activation of abscisic acid receptors in vivo by mutational stabilization of their agonist-bound conformation. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20838-20843.	3.3	89
36	Polarized cytokinesis in vacuolate cells of Arabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 2812-2817.	3.3	88

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37	Plant genome engineering in full bloom. Trends in Plant Science, 2014, 19, 284-287.	4.3	83
38	Sulfamethazine Suppresses Epigenetic Silencing in <i>Arabidopsis</i> by Impairing Folate Synthesis. Plant Cell, 2012, 24, 1230-1241.	3.1	77
39	Small Molecule Probes of ABA Biosynthesis and Signaling. Plant and Cell Physiology, 2018, 59, 1490-1499.	1.5	70
40	Cellulose synthesis: Cloning in silico. Current Biology, 1997, 7, R108-R111.	1.8	69
41	Dude, Where's My Phenotype? Dealing with Redundancy in Signaling Networks. Plant Physiology, 2005, 138, 558-559.	2.3	69
42	Glutamate signalling via a <scp>MEKK</scp>1 kinaseâ€dependent pathway induces changes in <scp>A</scp>rabidopsis root architecture. Plant Journal, 2013, 75, 1-10.	2.8	65
43	Chemical manipulation of plant water use. Bioorganic and Medicinal Chemistry, 2016, 24, 493-500.	1.4	58
44	A Rationally Designed Agonist Defines Subfamily IIIA Abscisic Acid Receptors As Critical Targets for Manipulating Transpiration. ACS Chemical Biology, 2017, 12, 2842-2848.	1.6	57
45	The MATH-BTB BPM3 and BPM5 subunits of Cullin3-RING E3 ubiquitin ligases target PP2CA and other clade A PP2Cs for degradation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15725-15734.	3.3	56
46	Systematic characterization of gene function in the photosynthetic alga Chlamydomonas reinhardtii. Nature Genetics, 2022, 54, 705-714.	9.4	42
47	Imaging plant cell death: GFP-Nit1 aggregation marks an early step of wound and herbicide induced cell death. BMC Plant Biology, 2005, 5, 4.	1.6	39
48	Sortin1-Hypersensitive Mutants Link Vacuolar-Trafficking Defects and Flavonoid Metabolism in Arabidopsis Vegetative Tissues. Chemistry and Biology, 2011, 18, 187-197.	6.2	38
49	Rapid biosensor development using plant hormone receptors as reprogrammable scaffolds. Nature Biotechnology, 2022, 40, 1855-1861.	9.4	34
50	Dispersion of Wood Microfibers in a Matrix of Thermoplastic Starch and Starchâ€"Polylactic Acid Blend. Journal of Biobased Materials and Bioenergy, 2007, 1, 71-77.	0.1	22
51	Click-to-lead design of a picomolar ABA receptor antagonist with potent activity in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	20
52	Dead cells don't dance: insights from live-cell imaging in plants. Current Opinion in Plant Biology, 2000, 3, 532-537.	3.5	19
53	User-defined single pot mutagenesis using unamplified oligo pools. Protein Engineering, Design and Selection, 2019, 32, 41-45.	1.0	19
54	Defining and Exploiting Hypersensitivity Hotspots to Facilitate Abscisic Acid Agonist Optimization. ACS Chemical Biology, 2019, 14, 332-336.	1.6	19

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55	Generation of a luciferase-based reporter for CHH and CG DNA methylation in Arabidopsis thaliana. Silence: A Journal of RNA Regulation, 2013, 4, 1.	8.0	15
56	Modification of plant cell wall structure accompanied by enhancement of saccharification efficiency using a chemical, lasalocid sodium. Scientific Reports, 2016, 6, 34602.	1.6	15
57	A Novel Phenolic Compound, Chloroxynil, Improves Agrobacterium-Mediated Transient Transformation in Lotus japonicus. PLoS ONE, 2015, 10, e0131626.	1.1	14
58	Discovery of small molecule inhibitors of xyloglucan endotransglucosylase (XET) activity by high-throughput screening. Phytochemistry, 2015, 117, 220-236.	1.4	13
59	Novel Vein Patterns in Arabidopsis Induced by Small Molecules. Plant Physiology, 2016, 170, 338-353.	2.3	11
60	Chemical Control of ABA Receptors to Enable Plant Protection Against Water Stress. Methods in Molecular Biology, 2018, 1795, 127-141.	0.4	8
61	ACCERBATIN, a small molecule at the intersection of auxin and reactive oxygen species homeostasis with herbicidal properties. Journal of Experimental Botany, 2017, 68, 4185-4203.	2.4	7
62	Toward Development of Fluorescence-Quenching-Based Biosensors for Drought Stress in Plants. Analytical Chemistry, 2019, 91, 15644-15651.	3.2	7
63	Hormone signalling: ABA has a breakdown. Nature Plants, 2016, 2, 16137.	4.7	6
64	A yeast surface display platform for plant hormone receptors: Toward directed evolution of new biosensors. AICHE Journal, 2020, 66, e16767.	1.8	6
65	Chemical-Induced Inhibition of Blue Light-Mediated Seedling Development Caused by Disruption of Upstream Signal Transduction Involving Cryptochromes inArabidopsis thaliana. Plant and Cell Physiology, 2016, 58, pcw181.	1.5	5
66	Optimized smallâ€molecule pullâ€downs define <scp>MLBP</scp>1 as an acylâ€lipidâ€binding protein. Plant Journal, 2019, 98, 928-941.	2.8	5
67	Inducible Gene Expression in Mammals: Plants Add to the Menu. Science Signaling, 2011, 4, pe13.	1.6	4
68	Abscisic acid as a gateway for the crops of tomorrow. Advances in Botanical Research, 2019, 92, 341-370.	0.5	4
69	Chemical Approaches for Improving Plant Water Use. Methods in Molecular Biology, 2022, 2462, 221-230.	0.4	4
70	A Closed Form Model for Molecular Ratchet-Type Chemically Induced Dimerization Modules. Biochemistry, 2023, 62, 281-291.	1.2	4
71	Abscisic Acid Signaling and Biosynthesis: Protein Structures and Molecular Probes. , 2018, , 113-146.		1
72	In Planta Labeling Using a Clickable ER-Disrupting Probe Suggests a Role for Oleosins in Arabidopsis Seedling ER Integrity. ACS Chemical Biology, 2021, 16, 2151-2157.	1.6	1

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73	Location, location â€¦ structure. Current Opinion in Plant Biology, 2011, 14, 477-479.	3.5	0
74	Engineering Plant Signal Transduction for Water Smart Crops. FASEB Journal, 2018, 32, 380.1.	0.2	0
75	Synthesis and characterization of abscisic acid receptor modulators. Methods in Enzymology, 2022, , .	0.4	0