

# Hannes Kollist

## List of Publications by Year in descending order

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73  
papers

7,593  
citations

53660

45  
h-index

76769

74  
g-index

82  
all docs

82  
docs citations

82  
times ranked

7754  
citing authors

#	ARTICLE	IF	CITATIONS
1	THESEUS1 modulates cell wall stiffness and abscisic acid production in <i>Arabidopsis thaliana</i> . Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	47
2	Phosphorylation of the plasma membrane H <sup>+</sup> -ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis. Plant Cell, 2022, 34, 2708-2729.	3.1	40
3	A role for calcium-dependent protein kinases in differential CO <sub>2</sub> and ABA-controlled stomatal closing and low CO <sub>2</sub> induced stomatal opening in Arabidopsis. New Phytologist, 2021, 229, 2765-2779.	3.5	38
4	Ozone responses in Arabidopsis: beyond stomatal conductance. Plant Physiology, 2021, 186, 180-192.	2.3	12
5	Combined action of guard cell plasma membrane rapid- and slow-type anion channels in stomatal regulation. Plant Physiology, 2021, 187, 2126-2133.	2.3	15
6	Jasmonic acid and salicylic acid play minor roles in stomatal regulation by CO <sub>2</sub> , abscisic acid, darkness, vapor pressure deficit and ozone. Plant Journal, 2021, 108, 134-150.	2.8	18
7	Multiparameter in vivo imaging in plants using genetically encoded fluorescent indicator multiplexing. Plant Physiology, 2021, 187, 537-549.	2.3	9
8	Rapid depolarization and cytosolic calcium increase go hand in hand in mesophyll cells' ozone response. New Phytologist, 2021, 232, 1692-1702.	3.5	3
9	Differential role of MAX2 and strigolactones in pathogen, ozone, and stomatal responses. Plant Direct, 2020, 4, e00206.	0.8	25
10	Genetic controls of short- and long-term stomatal CO <sub>2</sub> responses in Arabidopsis thaliana. Annals of Botany, 2020, 126, 179-190.	1.4	7
11	STRESS INDUCED FACTOR 2 Regulates Arabidopsis Stomatal Immunity through Phosphorylation of the Anion Channel SLAC1. Plant Cell, 2020, 32, 2216-2236.	3.1	28
12	FRET kinase sensor development reveals SnRK2/OST1 activation by ABA but not by MeJA and high CO <sub>2</sub> during stomatal closure. ELife, 2020, 9, .	2.8	68
13	The role of Arabidopsis ABA receptors from the PYR/PYL/RCAR family in stomatal acclimation and closure signal integration. Nature Plants, 2019, 5, 1002-1011.	4.7	115
14	Calcium signals in guard cells enhance the efficiency by which abscisic acid triggers stomatal closure. New Phytologist, 2019, 224, 177-187.	3.5	62
15	A ligand-independent origin of abscisic acid perception. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24892-24899.	3.3	84
16	Rapid Responses to Abiotic Stress: Priming the Landscape for the Signal Transduction Network. Trends in Plant Science, 2019, 24, 25-37.	4.3	264
17	Reactive Oxygen Species, Photosynthesis, and Environment in the Regulation of Stomata. Antioxidants and Redox Signaling, 2019, 30, 1220-1237.	2.5	38
18	Arabidopsis MLO2 is a negative regulator of sensitivity to extracellular reactive oxygen species. Plant, Cell and Environment, 2018, 41, 782-796.	2.8	24

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19	Stomatal VPD Response: There Is More to the Story Than ABA. <i>Plant Physiology</i> , 2018, 176, 851-864.	2.3	144
20	<scp>ABA</scp>-mediated regulation of stomatal density is <scp>OST</scp>-independent. <i>Plant Direct</i> , 2018, 2, e00082.	0.8	20
21	Insights into the Molecular Mechanisms of CO <sub>2</sub> -Mediated Regulation of Stomatal Movements. <i>Current Biology</i> , 2018, 28, R1356-R1363.	1.8	85
22	Abscisic acid-independent stomatal CO <sub>2</sub> signal transduction pathway and convergence of CO <sub>2</sub> and ABA signaling downstream of OST1 kinase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E9971-E9980.	3.3	91
23	Mitogen-activated protein kinases <scp>MPK</scp>4 and <scp>MPK</scp>12 are key components mediating <scp>CO</scp> <sub>2</sub> -induced stomatal movements. <i>Plant Journal</i> , 2018, 96, 1018-1035.	2.8	49
24	The Receptor-like Pseudokinase GHR1 Is Required for Stomatal Closure. <i>Plant Cell</i> , 2018, 30, 2813-2837.	3.1	95
25	Gas exchange-yield relationships of malting barley genotypes treated with fungicides and biostimulants. <i>European Journal of Agronomy</i> , 2018, 99, 129-137.	1.9	8
26	The Role of ENHANCED RESPONSES TO ABA1 (ERA1) in Arabidopsis Stomatal Responses Is Beyond ABA Signaling. <i>Plant Physiology</i> , 2017, 174, 665-671.	2.3	23
27	Fern Stomatal Responses to ABA and CO <sub>2</sub> Depend on Species and Growth Conditions. <i>Plant Physiology</i> , 2017, 174, 672-679.	2.3	74
28	A Rationally Designed Agonist Defines Subfamily IIIA Abscisic Acid Receptors As Critical Targets for Manipulating Transpiration. <i>ACS Chemical Biology</i> , 2017, 12, 2842-2848.	1.6	57
29	Isolation of guard-cell enriched tissue for RNA extraction. <i>Bio-protocol</i> , 2017, 7, e2447.	0.2	4
30	A Dominant Mutation in the HT1 Kinase Uncovers Roles of MAP Kinases and GHR1 in CO <sub>2</sub> -Induced Stomatal Closure. <i>Plant Cell</i> , 2016, 28, 2493-2509.	3.1	89
31	BODYGUARD is required for the biosynthesis of cutin in Arabidopsis. <i>New Phytologist</i> , 2016, 211, 614-626.	3.5	43
32	The Breakdown of Stored Triacylglycerols Is Required during Light-Induced Stomatal Opening. <i>Current Biology</i> , 2016, 26, 707-712.	1.8	111
33	Natural Variation in Arabidopsis Cvi-0 Accession Reveals an Important Role of MPK12 in Guard Cell CO <sub>2</sub> Signaling. <i>PLoS Biology</i> , 2016, 14, e2000322.	2.6	69
34	Guard cell <scp>SLAC</scp>-type anion channels mediate flagellin-induced stomatal closure. <i>New Phytologist</i> , 2015, 208, 162-173.	3.5	138
35	Large-Scale Phenomics Identifies Primary and Fine-Tuning Roles for CRKs in Responses Related to Oxidative Stress. <i>PLoS Genetics</i> , 2015, 11, e1005373.	1.5	167
36	A specialized histone H1 variant is required for adaptive responses to complex abiotic stress and related DNA methylation in Arabidopsis. <i>Plant Physiology</i> , 2015, 169, pp.00493.2015.	2.3	101

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37	Abscisic Acid Transport and Homeostasis in the Context of Stomatal Regulation. <i>Molecular Plant</i> , 2015, 8, 1321-1333.	3.9	98
38	The Role of ABA Recycling and Transporter Proteins in Rapid Stomatal Responses to Reduced Air Humidity, Elevated CO <sub>2</sub> , and Exogenous ABA. <i>Molecular Plant</i> , 2015, 8, 657-659.	3.9	96
39	The F-box protein MAX2 contributes to resistance to bacterial phytopathogens in <i>Arabidopsis thaliana</i> . <i>BMC Plant Biology</i> , 2015, 15, 53.	1.6	101
40	To open or to close: species-specific stomatal responses to simultaneously applied opposing environmental factors. <i>New Phytologist</i> , 2014, 202, 499-508.	3.5	86
41	The <i>Arabidopsis thaliana</i> cysteine-rich receptor-like kinases CRK6 and CRK7 protect against apoplastic oxidative stress. <i>Biochemical and Biophysical Research Communications</i> , 2014, 445, 457-462.	1.0	121
42	Closing gaps: linking elements that control stomatal movement. <i>New Phytologist</i> , 2014, 203, 44-62.	3.5	292
43	Mutations in the <i>SLAC1</i> anion channel slow stomatal opening and severely reduce K <sup>+</sup> uptake channel activity via enhanced cytosolic [Ca <sup>2+</sup> ] and increased Ca <sup>2+</sup> sensitivity of K <sup>+</sup> uptake channels. <i>New Phytologist</i> , 2013, 197, 88-98.	3.5	50
44	PYR/RCAR Receptors Contribute to Ozone-, Reduced Air Humidity-, Darkness-, and CO <sub>2</sub> -Induced Stomatal Regulation. <i>Plant Physiology</i> , 2013, 162, 1652-1668.	2.3	190
45	Calcium-Dependent and -Independent Stomatal Signaling Network and Compensatory Feedback Control of Stomatal Opening via Ca <sup>2+</sup> Sensitivity Priming. <i>Plant Physiology</i> , 2013, 163, 504-513.	2.3	47
46	Defense-related transcription factors <i>WRKY70</i> and <i>WRKY54</i> modulate osmotic stress tolerance by regulating stomatal aperture in <i>Arabidopsis</i> . <i>New Phytologist</i> , 2013, 200, 457-472.	3.5	223
47	Identification of Cyclic GMP-Activated Nonselective Ca <sup>2+</sup> -Permeable Cation Channels and Associated <i>CNGC5</i> and <i>CNGC6</i> Genes in <i>Arabidopsis</i> Guard Cells. <i>Plant Physiology</i> , 2013, 163, 578-590.	2.3	111
48	The <i>PYL4 A194T</i> Mutant Uncovers a Key Role of <i>PYL1-LIKE4/PROTEIN PHOSPHATASE 2CA</i> Interaction for Abscisic Acid Signaling and Plant Drought Resistance. <i>Plant Physiology</i> , 2013, 163, 441-455.	2.3	150
49	<i>Arabidopsis</i> PYR/PYL/RCAR Receptors Play a Major Role in Quantitative Regulation of Stomatal Aperture and Transcriptional Response to Abscisic Acid. <i>Plant Cell</i> , 2012, 24, 2483-2496.	3.1	493
50	<i>ERD15</i> An attenuator of plant ABA responses and stomatal aperture. <i>Plant Science</i> , 2012, 182, 19-28.	1.7	34
51	Anion channels in plant cells. <i>FEBS Journal</i> , 2011, 278, 4277-4292.	2.2	57
52	Central functions of bicarbonate in S-type anion channel activation and OST1 protein kinase in CO <sub>2</sub> signal transduction in guard cell. <i>EMBO Journal</i> , 2011, 30, 1645-1658.	3.5	167
53	Rapid stomatal closure triggered by a short ozone pulse is followed by reopening to overshooting values. <i>Plant Signaling and Behavior</i> , 2011, 6, 311-313.	1.2	9
54	Natural variation in ozone sensitivity among <i>Arabidopsis thaliana</i> accessions and its relation to stomatal conductance. <i>Plant, Cell and Environment</i> , 2010, 33, 914-925.	2.8	111

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55	Ozone-triggered rapid stomatal response involves the production of reactive oxygen species, and is controlled by SLAC1 and OST1. <i>Plant Journal</i> , 2010, 62, 442-453.	2.8	262
56	Stomatal action directly feeds back on leaf turgor: new insights into the regulation of the plant water status from non-invasive pressure probe measurements. <i>Plant Journal</i> , 2010, 62, 1072-82.	2.8	82
57	<i>Arabidopsis</i> GRI is involved in the regulation of cell death induced by extracellular ROS. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 5412-5417.	3.3	75
58	Nitric oxide modulates ozone-induced cell death, hormone biosynthesis and gene expression in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2009, 58, 1-12.	2.8	182
59	Complex phenotypic profiles leading to ozone sensitivity in <i>Arabidopsis thaliana</i> mutants. <i>Plant, Cell and Environment</i> , 2008, 31, 1237-1249.	2.8	69
60	SLAC1 is required for plant guard cell S-type anion channel function in stomatal signalling. <i>Nature</i> , 2008, 452, 487-491.	13.7	733
61	A novel device detects a rapid ozone-induced transient stomatal closure in intact <i>Arabidopsis</i> and its absence in <i>abi2</i> mutant. <i>Physiologia Plantarum</i> , 2007, 129, 796-803.	2.6	98
62	Components of apoplastic ascorbate use in <i>Betula pendula</i> leaves exposed to CO <sub>2</sub> and O <sub>3</sub> enrichment. <i>New Phytologist</i> , 2005, 165, 131-142.	3.5	27
63	Signalling and cell death in ozone-exposed plants. <i>Plant, Cell and Environment</i> , 2005, 28, 1021-1036.	2.8	418
64	<i>Arabidopsis</i> RADICAL-INDUCED CELL DEATH1 Belongs to the WWE Protein-Protein Interaction Domain Protein Family and Modulates Abscisic Acid, Ethylene, and Methyl Jasmonate Responses. <i>Plant Cell</i> , 2004, 16, 1925-1937.	3.1	217
65	Mutual antagonism of ethylene and jasmonic acid regulates ozone-induced spreading cell death in <i>Arabidopsis</i> . <i>Plant Journal</i> , 2004, 39, 59-69.	2.8	109
66	Acclimation of antioxidant pools to the light environment in a natural forest canopy. <i>New Phytologist</i> , 2004, 163, 87-97.	3.5	47
67	Impact of ozone on monoterpene emissions and evidence for an isoprene-like antioxidant action of monoterpenes emitted by <i>Quercus ilex</i> leaves. <i>Tree Physiology</i> , 2004, 24, 361-367.	1.4	272
68	Do the capacity and kinetics for modification of xanthophyll cycle pool size depend on growth irradiance in temperate trees?. <i>Plant, Cell and Environment</i> , 2003, 26, 1787-1801.	2.8	83
69	Physiological effects of immune challenge in captive greenfinches ( <i>Carduelis chloris</i> ). <i>Canadian Journal of Zoology</i> , 2003, 81, 371-379.	0.4	35
70	Repeatability of condition indices in captive greenfinches ( <i>Carduelis chloris</i> ). <i>Canadian Journal of Zoology</i> , 2002, 80, 636-643.	0.4	86
71	Ascorbate transport from the apoplast to the symplast in intact leaves. <i>Physiologia Plantarum</i> , 2001, 113, 377-383.	2.6	25
72	Ozone Flux to Plasmalemma in Barley and Wheat is controlled by Stomata rather than by direct Reaction of Ozone with Cell Wall Ascorbate. <i>Journal of Plant Physiology</i> , 2000, 156, 645-651.	1.6	41

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73	Enzymatic determination of ascorbic acid in leaf cell walls using acidic buffer during infiltration. <i>Biologia Plantarum</i> , 1996, 38, 229.	1.9	9