Sarah M Assmann

List of Publications by Year
in descending order

#	Article	IF	Citations
1	RNA multimerization as an organizing force for liquidâ€“liquid phase separation. Rna, 2022, 28, 16-26.	1.6	27
2	Experimental demonstration and pan-structurome prediction of climate-associated riboSNitches in Arabidopsis. Genome Biology, 2022, 23, 101.	3.8	10
3	Genome-wide analysis of the <i>inÂvivo</i> tRNA structurome reveals RNA structural and modification dynamics under heat stress. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	20
4	Advances and perspectives in the metabolomics of stomatal movement and the disease triangle. Plant Science, 2021, 302, 110697.	1.7	7
5	GTP binding by Arabidopsis extra-large G protein 2 is not essential for its functions. Plant Physiology, 2021, 186, 1240-1253.	2.3	15
6	A G protein-coupled receptor-like module regulates cellulose synthase secretion from the endomembrane system in Arabidopsis. Developmental Cell, 2021, 56, 1484-1497.e7.	3.1	23
7	Cantil: a previously unreported organ in wild-type <i>Arabidopsis</i> regulated by FT, ERECTA and heterotrimeric G proteins. Development (Cambridge), 2021, 148, .	1.2	4
8	The Î± subunit of the heterotrimeric G protein regulates mesophyll CO₂ conductance and drought tolerance in rice. New Phytologist, 2021, 232, 2324-2338.	3.5	15
9	External Cd2+ and protons activate the hyperpolarization-gated K+ channel KAT1 at the voltage sensor. Journal of General Physiology, 2021, 153, .	0.9	1
10	Metabolomics of redâ€lightâ€induced stomatal opening in <i>Arabidopsis thaliana</i>: Coupling with abscisic acid and jasmonic acid metabolism. Plant Journal, 2020, 101, 1331-1348.	2.8	25
11	A Guard Cell Abscisic Acid (ABA) Network Model That Captures the Stomatal Resting State. Frontiers in Physiology, 2020, 11, 927.	1.3	28
12	Molecular changes in Mesembryanthemum crystallinum guard cells underlying the C3 to CAM transition. Plant Molecular Biology, 2020, 103, 653-667.	2.0	14
13	Structure-seq2 probing of RNA structure upon amino acid starvation reveals both known and novel RNA switches in <i>Bacillus subtilis</i>. Rna, 2020, 26, 1431-1447.	1.6	15
14	Tissue-specific changes in the RNA structurome mediate salinity response in <i>Arabidopsis</i>. Rna, 2020, 26, 492-511.	1.6	25
15	The Role of Dwarfing Traits in Historical and Modern Agriculture with a Focus on Rice. Cold Spring Harbor Perspectives in Biology, 2019, 11, a034645.	2.3	38
16	Nucleotide exchangeâ€“dependent and nucleotide exchangeâ€“independent functions of plant heterotrimeric GTP-binding proteins. Science Signaling, 2019, 12, .	1.6	24
17	Model-driven discovery of calcium-related protein-phosphatase inhibition in plant guard cell signaling. PLoS Computational Biology, 2019, 15, e1007429.	1.5	34
18	Probing RNA structure in vivo. Current Opinion in Structural Biology, 2019, 59, 151-158.	2.6	66

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19	Directions for research and training in plant omics: Big Questions and Big Data. Plant Direct, 2019, 3, e00133.	0.8	47
20	The Arabidopsis heterotrimeric Gâ€protein Î² subunit, <scp>AGB</scp>1, is required for guard cell calcium sensing and calciumâ€induced calcium release. Plant Journal, 2019, 99, 231-244.	2.8	17
21	In Vivo Genome-Wide RNA Structure Probing with Structure-seq. Methods in Molecular Biology, 2019, 1933, 305-341.	0.4	10
22	Arabidopsis bioinformatics resources: The current state, challenges, and priorities for the future. Plant Direct, 2019, 3, e00109.	0.8	14
23	mRNA structural elements immediately upstream of the start codon dictate dependence upon eIF4A helicase activity. Genome Biology, 2019, 20, 300.	3.8	38
24	Phenotypic and genome-wide association with the local environment of Arabidopsis. Nature Ecology and Evolution, 2019, 3, 274-285.	3.4	67
25	In vivo RNA structural probing of uracil and guanine base-pairing by 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC). Rna, 2019, 25, 147-157.	1.6	37
26	StructureFold2: Bringing chemical probing data into the computational fold of RNA structural analysis. Methods, 2018, 143, 12-15.	1.9	26
27	A LASER-focused view into cells. Nature Chemical Biology, 2018, 14, 200-201.	3.9	2
28	The G Protein <i>Î²</i>-Subunit, AGB1, Interacts with FERONIA in RALF1-Regulated Stomatal Movement. Plant Physiology, 2018, 176, 2426-2440.	2.3	77
29	Modeling RNA secondary structure folding ensembles using SHAPE mapping data. Nucleic Acids Research, 2018, 46, 314-323.	6.5	72
30	Glyoxals as in vivo RNA structural probes of guanine base-pairing. Rna, 2018, 24, 114-124.	1.6	38
31	Illuminating the role of the GÎ± heterotrimeric G protein subunit, RGA1, in regulating photoprotection and photoavoidance in rice. Plant, Cell and Environment, 2018, 41, 451-468.	2.8	36
32	Genome-wide RNA structurome reprogramming by acute heat shock globally regulates mRNA abundance. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12170-12175.	3.3	83
33	G protein subunit phosphorylation as a regulatory mechanism in heterotrimeric G protein signaling in mammals, yeast, and plants. Biochemical Journal, 2018, 475, 3331-3357.	1.7	53
34	Technique Development for Probing RNA Structure In Vivo and Genome-Wide. Cold Spring Harbor Perspectives in Biology, 2018, 10, a032250.	2.3	32
35	Evolution and Structural Characteristics of Plant Voltage-Gated K⁺ Channels. Plant Cell, 2018, 30, 2898-2909.	3.1	51
36	A kinaseâ€dead version of <scp>FERONIA</scp> receptorâ€like kinase has doseâ€dependent impacts on rosette morphology and <scp>RALF</scp>1â€mediated stomatal movements. FEBS Letters, 2018, 592, 3429-3437.	1.3	25

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37	Interâ€relationships between the heterotrimeric GÎ² subunit AGB1, the receptorâ€like kinase FERONIA, and RALF1 in salinity response. Plant, Cell and Environment, 2018, 41, 2475-2489.	2.8	42
38	Metabolic Signatures in Response to Abscisic Acid (ABA) Treatment in Brassica napus Guard Cells Revealed by Metabolomics. Scientific Reports, 2017, 7, 12875.	1.6	39
39	The Next Generation of Training for Arabidopsis Researchers: Bioinformatics and Quantitative Biology. Plant Physiology, 2017, 175, 1499-1509.	2.3	11
40	Structure-seq2: sensitive and accurate genome-wide profiling of RNA structure in vivo. Nucleic Acids Research, 2017, 45, e135-e135.	6.5	104
41	Redox regulation of a guard cell SNF1-related protein kinase in <i>Brassica napus</i>, an oilseed crop. Biochemical Journal, 2017, 474, 2585-2599.	1.7	21
42	A new discrete dynamic model of ABA-induced stomatal closure predicts key feedback loops. PLoS Biology, 2017, 15, e2003451.	2.6	75
43	Bridging the gap between<i>in vitro</i>and<i>in vivo</i>RNA folding. Quarterly Reviews of Biophysics, 2016, 49, e10.	2.4	108
44	50Âyears of Arabidopsis research: highlights and future directions. New Phytologist, 2016, 209, 921-944.	3.5	186
45	Guard cell sensory systems: recent insights on stomatal responses to light, abscisic acid, and CO2. Current Opinion in Plant Biology, 2016, 33, 157-167.	3.5	181
46	Genome-Wide Analysis of RNA Secondary Structure. Annual Review of Genetics, 2016, 50, 235-266.	3.2	186
47	The Î±-subunit of the rice heterotrimeric G protein, RGA1, regulates drought tolerance during the vegetative phase in the dwarf rice mutant<i>d1</i>. Journal of Experimental Botany, 2016, 67, 3433-3443.	2.4	61
48	Molecular and systems approaches towards droughtâ€tolerant canola crops. New Phytologist, 2016, 210, 1169-1189.	3.5	70
49	Protein Structure Is Related to RNA Structural Reactivity In Vivo. Journal of Molecular Biology, 2016, 428, 758-766.	2.0	14
50	The effect of NaCl on stomatal opening in Arabidopsis wild type and<i>agb1</i>heterotrimeric G-protein mutant plants. Plant Signaling and Behavior, 2016, 11, e1085275.	1.2	24
51	Preparation of Epidermal Peels and Guard Cell Protoplasts for Cellular, Electrophysiological, and -Omics Assays of Guard Cell Function. Methods in Molecular Biology, 2016, 1363, 89-121.	0.4	30
52	Expression of potato RNA-binding proteins StUBA2a/b and StUBA2c induces hypersensitive-like cell death and early leaf senescence in Arabidopsis. Journal of Experimental Botany, 2015, 66, 4023-4033.	2.4	17
53	Genome-wide profiling of in vivo RNA structure at single-nucleotide resolution using structure-seq. Nature Protocols, 2015, 10, 1050-1066.	5.5	87
54	The heterotrimeric <scp>G</scp>â€protein <i>Î²</i> subunit, <scp>AGB</scp>1, plays multiple roles in the <scp><i>A</i></scp><i>rabidopsis</i> salinity response. Plant, Cell and Environment, 2015, 38, 2143-2156.	2.8	37

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55	StructureFold: genome-wide RNA secondary structure mapping and reconstruction <i>inÂvivo</i>. Bioinformatics, 2015, 31, 2668-2675.	1.8	43
56	The RNA structurome: transcriptome-wide structure probing with next-generation sequencing. Trends in Biochemical Sciences, 2015, 40, 221-232.	3.7	137
57	A stable RNA G-quadruplex within the 5â€²-UTR of <i>Arabidopsis thaliana ATR</i> mRNA inhibits translation. Biochemical Journal, 2015, 467, 91-102.	1.7	71
58	The guard cell metabolome: functions in stomatal movement and global food security. Frontiers in Plant Science, 2015, 6, 334.	1.7	71
59	Extra-Large G Proteins Expand the Repertoire of Subunits in Arabidopsis Heterotrimeric G Protein Signaling. Plant Physiology, 2015, 169, 512-529.	2.3	97
60	Evidence for an unusual transmembrane configuration of AGG3, a class C GÎ³ subunit of Arabidopsis. Plant Journal, 2015, 81, 388-398.	2.8	41
61	Metabolite Transporter Regulation of ABA Function and Guard Cell Response. Molecular Plant, 2014, 7, 1505-1507.	3.9	5
62	Multi-level Modeling of Light-Induced Stomatal Opening Offers New Insights into Its Regulation by Drought. PLoS Computational Biology, 2014, 10, e1003930.	1.5	77
63	Border Controlâ€"A Membrane-Linked Interactome of <i>Arabidopsis</i>. Science, 2014, 344, 711-716.	6.0	213
64	In vivo genome-wide profiling of RNA secondary structure reveals novel regulatory features. Nature, 2014, 505, 696-700.	13.7	710
65	Significant reduction of Bi<scp>FC</scp> nonâ€specific assembly facilitates <i>in planta</i> assessment of heterotrimeric Gâ€protein interactors. Plant Journal, 2014, 80, 553-567.	2.8	184
66	Abscisic Acidâ€"Responsive Guard Cell Metabolomes of <i>Arabidopsis</i> Wild-Type and <i>gpa1</i> G-Protein Mutants Â. Plant Cell, 2014, 25, 4789-4811.	3.1	79
67	Plant single-cell and single-cell-type metabolomics. Trends in Plant Science, 2014, 19, 637-646.	4.3	110
68	Determination of in vivo RNA structure in low-abundance transcripts. Nature Communications, 2013, 4, 2971.	5.8	113
69	Open Stomata 1 (<scp>OST</scp>1) is limiting in abscisic acid responses of Arabidopsis guard cells. New Phytologist, 2013, 200, 1049-1063.	3.5	171
70	Natural Variation in Abiotic Stress and Climate Change Responses in<i>Arabidopsis</i>: Implications for Twenty-First-Century Agriculture. International Journal of Plant Sciences, 2013, 174, 3-26.	0.6	44
71	A hybridization-based approach for quantitative and low-bias single-stranded DNA ligation. Analytical Biochemistry, 2013, 435, 181-186.	1.1	41
72	Ca2+-dependent GTPase, Extra-large G Protein 2 (XLG2), Promotes Activation of DNA-binding Protein Related to Vernalization 1 (RTV1), Leading to Activation of Floral Integrator Genes and Early Flowering in Arabidopsis. Journal of Biological Chemistry, 2012, 287, 8242-8253.	1.6	51

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73	Heterotrimeric G-protein regulation of ROS signalling and calcium currents in Arabidopsis guard cells. Journal of Experimental Botany, 2011, 62, 2371-2379.	2.4	114
74	An atypical heterotrimeric Gâ€protein Î³â€subunit is involved in guard cell K⁺â€channel regulation and morphological development in <i>Arabidopsis thaliana</i>. Plant Journal, 2011, 67, 840-851.	2.8	190
75	The <i>Î±</i>-Subunit of the Arabidopsis Heterotrimeric G Protein, GPA1, Is a Regulator of Transpiration Efficiency. Plant Physiology, 2010, 152, 2067-2077.	2.3	80
76	Boolean modeling of transcriptome data reveals novel modes of heterotrimeric Gâ€protein action. Molecular Systems Biology, 2010, 6, 372.	3.2	117
77	Heterotrimeric G proteins regulate reproductive trait plasticity in response to water availability. New Phytologist, 2010, 185, 734-746.	3.5	38
78	A membrane protein / signaling protein interaction network for Arabidopsis version AMPv2. Frontiers in Physiology, 2010, 1, 24.	1.3	131
79	Hope for Humpty Dumpty: Systems Biology of Cellular Signaling. Plant Physiology, 2010, 152, 470-479.	2.3	4
80	Hormone interactions in stomatal function. Plant Molecular Biology, 2009, 69, 451-462.	2.0	424
81	Two Novel GPCR-Type G Proteins Are Abscisic Acid Receptors in Arabidopsis. Cell, 2009, 136, 136-148.	13.5	411
82	Arabidopsis Extra Large G-Protein 2 (XLG2) Interacts with the GÎ² Subunit of Heterotrimeric G Protein and Functions in Disease Resistance. Molecular Plant, 2009, 2, 513-525.	3.9	99
83	Discrete Dynamic Modeling with Asynchronous Update, or How to Model Complex Systems in the Absence of Quantitative Information. Methods in Molecular Biology, 2009, 553, 207-225.	0.4	28
84	Arabidopsis extraâ€large G proteins (XLGs) regulate root morphogenesis. Plant Journal, 2008, 53, 248-263.	2.8	109
85	Regulation of rootâ€wave response by extra large and conventional G proteins in <i>Arabidopsis thaliana</i>. Plant Journal, 2008, 55, 311-322.	2.8	72
86	Overexpression of woundâ€responsive RNAâ€binding proteins induces leaf senescence and hypersensitiveâ€like cell death. New Phytologist, 2008, 180, 57-70.	3.5	70
87	The plant innate immunity response in stomatal guard cells invokes Gâ€proteinâ€dependent ion channel regulation. Plant Journal, 2008, 56, 984-996.	2.8	181
88	Whole proteome identification of plant candidate G-protein coupled receptors in Arabidopsis, rice, and poplar: computational prediction and in-vivo protein coupling. Genome Biology, 2008, 9, R120.	13.9	81
89	G<i>Î³</i>1 + G<i>Î³</i>2 =Ì¸ G<i>Î²</i>: Heterotrimeric G Protein G<i>Î³</i>-Deficient Mutants Do Not Recapitulate All Phenotypes of G<i>Î²</i>-Deficient Mutants Â Â Â. Plant Physiology, 2008, 147, 636-649.	2.3	75
90	Characterization of the Arabidopsis Heterotrimeric G Protein. Journal of Biological Chemistry, 2008, 283, 13913-13922.	1.6	61

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91	Abscisic acid regulation of guard-cell K ⁺ and anion channels in GÎ²- and RGS-deficient <i>Arabidopsis</i> lines. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 8476-8481.	3.3	107
92	Light Regulation of Stomatal Movement. Annual Review of Plant Biology, 2007, 58, 219-247.	8.6	732
93	pgd1, an Arabidopsis thaliana deletion mutant, is defective in pollen germination. Sexual Plant Reproduction, 2007, 20, 137-149.	2.2	4
94	Effect of brassinolide, alone and in concert with abscisic acid, on control of stomatal aperture and potassium currents of Vicia faba guard cell protoplasts. Physiologia Plantarum, 2006, 128, 134-143.	2.6	92
95	G-Protein Complex Mutants Are Hypersensitive to Abscisic Acid Regulation of Germination and Postgermination Development. Plant Physiology, 2006, 141, 243-256.	2.3	219
96	G Protein Signaling in the Regulation of Rice Seed Germination. Science Signaling, 2005, 2005, cm12-cm12.	1.6	10
97	G Protein Signaling in the Regulation of Arabidopsis Seed Germination. Science Signaling, 2005, 2005, cm11-cm11.	1.6	10
98	G Proteins Go Green: A Plant G Protein Signaling FAQ Sheet. Science, 2005, 310, 71-73.	6.0	73
99	G Protein Regulation of Disease Resistance During Infection of Rice with Rice Blast Fungus. Science Signaling, 2005, 2005, cm13-cm13.	1.6	17
100	Plant G Proteins, Phytohormones, and Plasticity: Three Questions and a Speculation. Science Signaling, 2004, 2004, re20-re20.	1.6	47
101	The Arabidopsis Putative G Proteinâ€"Coupled Receptor GCR1 Interacts with the G Protein Î± Subunit GPA1 and Regulates Abscisic Acid Signaling. Plant Cell, 2004, 16, 1616-1632.	3.1	309
102	Plants: the latest model system for Gâ€protein research. EMBO Reports, 2004, 5, 572-578.	2.0	219
103	Guard cells: a dynamic signaling model. Current Opinion in Plant Biology, 2004, 7, 537-546.	3.5	209
104	Plant heterotrimeric G protein function: insights from Arabidopsis and rice mutants. Current Opinion in Plant Biology, 2004, 7, 719-731.	3.5	211
105	Sphingolipid signalling in Arabidopsis guard cells involves heterotrimeric G proteins. Nature, 2003, 423, 651-654.	13.7	343
106	OPEN STOMATA1 opens the door to ABA signaling in Arabidopsis guard cells. Trends in Plant Science, 2003, 8, 151-153.	4.3	114
107	Heterotrimeric and Unconventional GTP Binding Proteins in Plant Cell Signaling. Plant Cell, 2002, 14, S355-S373.	3.1	190
108	Preparation and applications of Arabidopsis thaliana guard cell protoplasts. New Phytologist, 2002, 153, 517-526.	3.5	82

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109	Modulation of an RNA-binding protein by abscisic-acid-activated protein kinase. Nature, 2002, 418, 793-797.	13.7	169
110	G Protein Regulation of Ion Channels and Abscisic Acid Signaling in Arabidopsis Guard Cells. Science, 2001, 292, 2070-2072.	6.0	480
111	Apparent Absence of a Redox Requirement for Blue Light Activation of Pump Current in Broad Bean Guard Cells. Plant Physiology, 2001, 125, 329-338.	2.3	45
112	ABAâ€deficient (aba1)andABAâ€insensitive (abi1â€1, abi2â€1) mutants ofArabidopsishave a wildâ€type stomatal response to humidity. Plant, Cell and Environment, 2000, 23, 387-395.	2.8	125
113	Increases in cytosolic Ca 2+ are not required for abscisic acid-inhibition of inward K + currents in guard cells of Vicia faba L.. Planta, 2000, 211, 209-217.	1.6	49
114	Regulation of Abscisic Acid-Induced Stomatal Closure and Anion Channels by Guard Cell AAPK Kinase. Science, 2000, 287, 300-303.	6.0	434
115	Arabidopsis thaliana 'extra-large GTP-binding protein' (AtXLG1): a new class of G-protein. Plant Molecular Biology, 1999, 40, 55-64.	2.0	90
116	A laser microsurgical method of cell wall removal allows detection of largeconductance ion channels in the guard cell plasma membrane. Protoplasma, 1999, 209, 58-67.	1.0	10
117	Differential Responses of Abaxial and Adaxial Guard Cells of Broad Bean to Abscisic Acid and Calcium. Plant Physiology, 1998, 118, 1421-1429.	2.3	52
118	Seal-promoting solutions and pipette perfusion for patch clamping plant cells. Plant Journal, 1997, 11, 891-896.	2.8	11
119	Signal Transduction in Guard Cells. Annual Review of Cell Biology, 1993, 9, 345-375.	26.0	402
120	Heterotrimeric G-Protein-Coupled Signaling in Higher Plants. , 0, , 30-63.		0
121	Crosstalk in Pathogen and Hormonal Regulation of Guard Cell Signaling. , 0, , 96-112.		6
122	An Overview of Systems Biology. , 0, , 41-66.		1