Barry James Pogson

List of Publications by Year
in descending order

133 papers	14,587 citations	22153 59 h-index	19749 117 g-index
146 all docs	146 docs citations	146 times ranked	13354 citing authors

#	Article	IF	Citations
1	Carotenoid Metabolism in Plants. Molecular Plant, 2015, 8, 68-82.	8.3	863
2	VITAMIN SYNTHESIS IN PLANTS: Tocopherols and Carotenoids. Annual Review of Plant Biology, 2006, 57, 711-738.	18.7	733
3	Source to sink: regulation of carotenoid biosynthesis in plants. Trends in Plant Science, 2010, 15, 266-274.	8.8	732
4	Reconsidering plant memory: Intersections between stress recovery, RNA turnover, and epigenetics. Science Advances, 2016, 2, e1501340.	10.3	477
5	Evidence for a SAL1-PAP Chloroplast Retrograde Pathway That Functions in Drought and High Light Signaling in Arabidopsis Â Â Â. Plant Cell, 2011, 23, 3992-4012.	6.6	473
6	Learning the Languages of the Chloroplast: Retrograde Signaling and Beyond. Annual Review of Plant Biology, 2016, 67, 25-53.	18.7	455
7	Identification of the Carotenoid Isomerase Provides Insight into Carotenoid Biosynthesis, Prolamellar Body Formation, and Photomorphogenesis. Plant Cell, 2002, 14, 321-332.	6.6	437
8	Carotenoid accumulation and function in seeds and non-green tissues. Plant, Cell and Environment, 2006, 29, 435-445.	5.7	395
9	Plastid signalling to the nucleus and beyond. Trends in Plant Science, 2008, 13, 602-609.	8.8	358
10	The Absence of ALTERNATIVE OXIDASE1a in Arabidopsis Results in Acute Sensitivity to Combined Light and Drought Stress Â. Plant Physiology, 2008, 147, 595-610.	4.8	357
11	Arabidopsis carotenoid mutants demonstrate that lutein is not essential for photosynthesis in higher plants.. Plant Cell, 1996, 8, 1627-1639.	6.6	325
12	Altered xanthophyll compositions adversely affect chlorophyll accumulation and nonphotochemical quenching in Arabidopsis mutants. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 13324-13329.	7.1	292
13	Remodeled Respiration in ndufs4 with Low Phosphorylation Efficiency Suppresses Arabidopsis Germination and Growth and Alters Control of Metabolism at Night Â Â. Plant Physiology, 2009, 151, 603-619.	4.8	281
14	Synthesis and Function of Apocarotenoid Signals in Plants. Trends in Plant Science, 2016, 21, 792-803.	8.8	261
15	Global Changes in Gene Expression in Response to High Light in Arabidopsis,. Plant Physiology, 2002, 130, 1109-1120.	4.8	254
16	Systemic and Intracellular Responses to Photooxidative Stress in Arabidopsis. Plant Cell, 2008, 19, 4091-4110.	6.6	223
17	Functional Analysis of the b and e Lycopene Cyclase Enzymes of Arabidopsis Reveals a Mechanism for Control of Cyclic Carotenoid Formation. Plant Cell, 1996, 8, 1613.	6.6	219
18	A rapid, non-invasive procedure for quantitative assessment of drought survival using chlorophyll fluorescence. Plant Methods, 2008, 4, 27.	4.3	215

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19	Signaling from the Endoplasmic Reticulum Activates Brassinosteroid Signaling and Promotes Acclimation to Stress in Arabidopsis. Science Signaling, 2010, 3, ra69.	3.6	211
20	Regulation of Carotenoid Composition and Shoot Branching inArabidopsisby a Chromatin Modifying Histone Methyltransferase, SDG8. Plant Cell, 2009, 21, 39-53.	6.6	207
21	Photoprotection in a zeaxanthin- and lutein-deficient double mutant of Arabidopsis. Photosynthesis Research, 2001, 67, 139-145.	2.9	194
22	Genetic Dissection of Chloroplast Biogenesis and Development: An Overview Â. Plant Physiology, 2011, 155, 1545-1551.	4.8	192
23	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. Journal of Experimental Botany, 2017, 68, 3129-3143.	4.8	187
24	Hypoxia-responsive microRNAs and trans-acting small interfering RNAs in Arabidopsis. Journal of Experimental Botany, 2010, 61, 165-177.	4.8	184
25	Balancing metabolites in drought: the sulfur assimilation conundrum. Trends in Plant Science, 2013, 18, 18-29.	8.8	184
26	A mutation affecting ASCORBATE PEROXIDASE 2 gene expression reveals a link between responses to high light and drought tolerance. Plant, Cell and Environment, 2006, 29, 269-281.	5.7	172
27	The nucleotidase/phosphatase SAL1 is a negative regulator of drought tolerance in Arabidopsis. Plant Journal, 2009, 58, 299-317.	5.7	164
28	Insights into chloroplast biogenesis and development. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1017-1024.	1.0	164
29	An Uncharacterized Apocarotenoid-Derived Signal Generated in Î¶-Carotene Desaturase Mutants Regulates Leaf Development and the Expression of Chloroplast and Nuclear Genes inArabidopsisÂ Â. Plant Cell, 2014, 26, 2524-2537.	6.6	160
30	Evolutionary Conservation of ABA Signaling for Stomatal Closure. Plant Physiology, 2017, 174, 732-747.	4.8	158
31	Sensing and signaling of oxidative stress in chloroplasts by inactivation of the SAL1 phosphoadenosine phosphatase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4567-76.	7.1	147
32	Periodic root branching in Arabidopsis requires synthesis of an uncharacterized carotenoid derivative. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1300-9.	7.1	139
33	Evolution of chloroplast retrograde signaling facilitates green plant adaptation to land. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5015-5020.	7.1	138
34	A chloroplast retrograde signal, 3â€™-phosphoadenosine 5â€™-phosphate, acts as a secondary messenger in abscisic acid signaling in stomatal closure and germination. ELife, 2017, 6, .	6.0	132
35	Impact of chloroplastic- and extracellular-sourced ROS on high light-responsive gene expression in Arabidopsis. Journal of Experimental Botany, 2008, 59, 121-133.	4.8	128
36	Genetic manipulation of carotenoid biosynthesis and photoprotection. Philosophical Transactions of the Royal Society B: Biological Sciences, 2000, 355, 1395-1403.	4.0	125

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37	The multiple roles of light-harvesting chlorophyll a/b-protein complexes define structure and optimize function of Arabidopsis chloroplasts: A study using two chlorophyll b-less mutants. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 973-984.	1.0	124
38	Subset of heat-shock transcription factors required for the early response of Arabidopsis to excess light. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14474-14479.	7.1	123
39	Alternative splicing, activation of cryptic exons and amino acid substitutions in carotenoid biosynthetic genes are associated with lutein accumulation in wheat endosperm. Functional and Integrative Genomics, 2009, 9, 363-376.	3.5	118
40	Chlorophyll Biosynthesis. Expression of a SecondChl IGene of Magnesium Chelatase in Arabidopsis Supports Only Limited Chlorophyll Synthesis. Plant Physiology, 2002, 128, 770-779.	4.8	113
41	The Arabidopsis DNA Methylome Is Stable under Transgenerational Drought Stress. Plant Physiology, 2017, 175, 1893-1912.	4.8	112
42	Morphine-pathway block in top1 poppies. Nature, 2004, 431, 413-414.	27.8	108
43	Ethylene Responses in Rice Roots and Coleoptiles Are Differentially Regulated by a Carotenoid Isomerase-Mediated Abscisic Acid Pathway. Plant Cell, 2015, 27, 1061-1081.	6.6	107
44	TraitCapture: genomic and environment modelling of plant phenomic data. Current Opinion in Plant Biology, 2014, 18, 73-79.	7.1	101
45	Exploring the Function-Location Nexus: Using Multiple Lines of Evidence in Defining the Subcellular Location of Plant Proteins. Plant Cell, 2009, 21, 1625-1631.	6.6	95
46	Wheat drought tolerance in the field is predicted by amino acid responses to glasshouse-imposed drought. Journal of Experimental Botany, 2019, 70, 4931-4948.	4.8	92
47	Differential Expression of Two 1-Aminocyclopropane-1-Carboxylic Acid Oxidase Genes in Broccoli after Harvest. Plant Physiology, 1995, 108, 651-657.	4.8	90
48	Rapid Recovery Gene Downregulation during Excess-Light Stress and Recovery in Arabidopsis. Plant Cell, 2017, 29, 1836-1863.	6.6	90
49	A comparison of the EU regulatory approach to directed mutagenesis with that of other jurisdictions, consequences for international trade and potential steps forward. New Phytologist, 2019, 222, 1673-1684.	7.3	90
50	The Cytoskeleton and the Peroxisomal-Targeted SNOWY COTYLEDON3 Protein Are Required for Chloroplast Development in Arabidopsis Â. Plant Cell, 2010, 22, 3423-3438.	6.6	77
51	Addressing Research Bottlenecks to Crop Productivity. Trends in Plant Science, 2021, 26, 607-630.	8.8	76
52	A GDSL Esterase/Lipase Catalyzes the Esterification of Lutein in Bread Wheat. Plant Cell, 2019, 31, 3092-3112.	6.6	74
53	Improved survival of very high light and oxidative stress is conferred by spontaneous gain-of-function mutations in Chlamydomonas. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1709, 45-57.	1.0	72
54	A simple chlorophyll fluorescence parameter that correlates with the rate coefficient of photoinactivation of Photosystem II. Photosynthesis Research, 2005, 84, 43-49.	2.9	69

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55	Arabidopsis tRNA Adenosine Deaminase Arginine Edits the Wobble Nucleotide of Chloroplast tRNAArg(ACG) and Is Essential for Efficient Chloroplast Translation. Plant Cell, 2009, 21, 2058-2071.	6.6	69
56	More than meets the eye: from carotenoid biosynthesis, to new insights into apocarotenoid signaling. Current Opinion in Plant Biology, 2015, 27, 172-179.	7.1	67
57	Transcriptional Control of SET DOMAIN GROUP 8 and CAROTENOID ISOMERASE during Arabidopsis Development. Molecular Plant, 2010, 3, 174-191.	8.3	65
58	Role of the Arabidopsis PIN6 Auxin Transporter in Auxin Homeostasis and Auxin-Mediated Development. PLoS ONE, 2013, 8, e70069.	2.5	65
59	Histone Acetylation, VERNALIZATION INSENSITIVE 3 , FLOWERING LOCUS C , and the Vernalization Response. Molecular Plant, 2009, 2, 724-737.	8.3	64
60	The SCO2 protein disulphide isomerase is required for thylakoid biogenesis and interacts with LCHB1 chlorophyll a/b binding proteins which affects chlorophyll biosynthesis in Arabidopsis seedlings. Plant Journal, 2012, 69, 743-754.	5.7	64
61	A Novel fry1 Allele Reveals the Existence of a Mutant Phenotype Unrelated to 5â€²->3â€² Exoribonuclease (XRN) Activities in Arabidopsis thaliana Roots. PLoS ONE, 2011, 6, e16724.	2.5	64
62	Chloroplast-to-nucleus communication. Plant Signaling and Behavior, 2010, 5, 1575-1582.	2.4	63
63	Regulation of lutein biosynthesis and prolamellar body formation in Arabidopsis. Functional Plant Biology, 2007, 34, 663.	2.1	59
64	VERNALIZATION INSENSITIVE 3 (VIN3) is required for the response of Arabidopsis thaliana seedlings exposed to low oxygen conditions. Plant Journal, 2009, 59, 576-587.	5.7	59
65	Uncoupling High Light Responses from Singlet Oxygen Retrograde Signaling and Spatial-Temporal Systemic Acquired Acclimation. Plant Physiology, 2016, 171, 1734-1749.	4.8	59
66	Convergence of mitochondrial and chloroplastic ANAC017/PAP-dependent retrograde signalling pathways and suppression of programmed cell death. Cell Death and Differentiation, 2017, 24, 955-960.	11.2	58
67	Occurrence of the lutein-epoxide cycle in mistletoes of the Loranthaceae and Viscaceae. Planta, 2003, 217, 868-879.	3.2	54
68	LETM Proteins Play a Role in the Accumulation of Mitochondrially Encoded Proteins in Arabidopsis thaliana and AtLETM2 Displays Parent of Origin Effects. Journal of Biological Chemistry, 2012, 287, 41757-41773.	3.4	54
69	Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. Plant, Cell and Environment, 2019, 42, 2133-2150.	5.7	54
70	Quantification of cyclic electron flow around Photosystem I in spinach leaves during photosynthetic induction. Photosynthesis Research, 2007, 94, 347-357.	2.9	53
71	Prospects for Carotenoid Biofortification Targeting Retention and Catabolism. Trends in Plant Science, 2020, 25, 501-512.	8.8	53
72	Glucose-induced Expression of Carotenoid Biosynthesis Genes in the Dark Is Mediated by Cytosolic pH in the Cyanobacterium Synechocystis sp. PCC 6803. Journal of Biological Chemistry, 2004, 279, 25320-25325.	3.4	50

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73	Systemic and Local Responses to Repeated HL Stress-Induced Retrograde Signaling in Arabidopsis. Frontiers in Plant Science, 2012, 3, 303.	3.6	49
74	A cis-carotene derived apocarotenoid regulates etioplast and chloroplast development. ELife, 2020, 9, .	6.0	49
75	Reconsidering the nature and mode of action of metabolite retrograde signals from the chloroplast. Frontiers in Plant Science, 2012, 3, 300.	3.6	48
76	Using Phenomic Analysis of Photosynthetic Function for Abiotic Stress Response Gene Discovery. The Arabidopsis Book, 2016, 14, e0185.	0.5	48
77	Comparative proteomics of high light stress in the model algaChlamydomonas reinhardtii. Proteomics, 2006, 6, 4309-4320.	2.2	47
78	The Transcription Factor MYB29 Is a Regulator of ALTERNATIVE OXIDASE1a. Plant Physiology, 2017, 173, 1824-1843.	4.8	46
79	A Mak-like kinase is a repressor of GAMYB in barley aleurone. Plant Journal, 2003, 33, 707-717.	5.7	45
80	Lutein from Deepoxidation of Lutein Epoxide Replaces Zeaxanthin to Sustain an Enhanced Capacity for Nonphotochemical Chlorophyll Fluorescence Quenching in Avocado Shade Leaves in the Dark. Plant Physiology, 2011, 156, 393-403.	4.8	45
81	A chromatin modifying enzyme, SDG8, is involved in morphological, gene expression, and epigenetic responses to mechanical stimulation. Frontiers in Plant Science, 2014, 5, 533.	3.6	44
82	Relative functional and optical absorption cross-sections of PSII and other photosynthetic parameters monitored in situ, at a distance with a time resolution of a few seconds, using a prototype light induced fluorescence transient (LIFT) device. Functional Plant Biology, 2017, 44, 985.	2.1	40
83	De Novo Synthesis and Degradation of Lx and V Cycle Pigments during Shade and Sun Acclimation in Avocado Leaves. Plant Physiology, 2009, 149, 1179-1195.	4.8	39
84	Consequences of Cool Storage of Broccoli on Physiological and Biochemical Changes and Subsequent Senescence at 20 Â°C. Journal of the American Society for Horticultural Science, 1997, 122, 553-558.	1.0	39
85	Canopy conundrums: building on the Biosphere 2 experience to scale measurements of inner and outer canopy photoprotection from the leaf to the landscape. Functional Plant Biology, 2012, 39, 1.	2.1	38
86	Characterization of a cDNA encoding the protein moiety of a putative arabinogalactan protein from Lycopersicon esculentum. Plant Molecular Biology, 1995, 28, 347-352.	3.9	36
87	Molecular characterization and transcriptome analysis of orange head Chinese cabbage (Brassica) Tj ETQq1 1 0.784314 rgBT /Overlock	3.2	36
88	Antisense inhibition of the beta-carotene hydroxylase enzyme in Arabidopsis and the implications for carotenoid accumulation, photoprotection and antenna assembly. , 2001, 67, 127-137.		33
89	Maintenance of preâ€existing DNA methylation states through recurring excessâ€light stress. Plant, Cell and Environment, 2018, 41, 1657-1672.	5.7	33
90	Potential implications for epigenetic regulation of carotenoid biosynthesis during root and shoot development. Plant Signaling and Behavior, 2009, 4, 339-341.	2.4	30

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91	From ecophysiology to phenomics: some implications of photoprotection and shadeâ€“sun acclimation in situ for dynamics of thylakoids in vitro. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 3503-3514.	4.0	30
92	Chloroplast Activity and 3â€²phosphadenosine 5â€²phosphate Signaling Regulate Programmed Cell Death in Arabidopsis. Plant Physiology, 2016, 170, 1745-1756.	4.8	30
93	Suppression of glucan, water dikinase in the endosperm alters wheat grain properties, germination and coleoptile growth. Plant Biotechnology Journal, 2016, 14, 398-408.	8.3	29
94	Photoprotection of residual functional photosystem II units that survive illumination in the absence of repair, and their critical role in subsequent recovery. Physiologia Plantarum, 2006, 128, 415-424.	5.2	28
95	Promoting gene expression in plants by permissive histone lysine methylation. Plant Signaling and Behavior, 2009, 4, 484-488.	2.4	26
96	A mutation in the purine biosynthetic enzyme ATASE2 impacts high light signalling and acclimation responses in green and chlorotic sectors of Arabidopsis leaves. Functional Plant Biology, 2011, 38, 401.	2.1	26
97	A Genomeâ€Wide Association Study of Nonâ€Photochemical Quenching in response to local seasonal climates in Arabidopsis thaliana. Plant Direct, 2019, 3, e00138.	1.9	25
98	Effects of altered Î±â€•and Î²â€branch carotenoid biosynthesis on photoprotection and wholeâ€plant acclimation of Arabidopsis to photoâ€oxidative stress. Plant, Cell and Environment, 2013, 36, 438-453.	5.7	24
99	On the Occurrence and Structure of Subunits of Endopolygalacturonase Isoforms in Mature-Green and Ripening Tomato Fruits. Functional Plant Biology, 1991, 18, 65.	2.1	24
100	The Role of Carotenoids in Energy Quenching. , 2005, , 515-537.		23
101	Inflorescence stem grafting made easy in Arabidopsis. Plant Methods, 2012, 8, 50.	4.3	23
102	Genomic breeding for food, environment and livelihoods. Food Security, 2015, 7, 375-382.	5.3	23
103	RNA Polymerase II Read-Through Promotes Expression of Neighboring Genes in SAL1-PAP-XRN Retrograde Signaling. Plant Physiology, 2018, 178, 1614-1630.	4.8	23
104	Molecular and physiological responses during thermal acclimation of leaf photosynthesis and respiration in rice. Plant, Cell and Environment, 2020, 43, 594-610.	5.7	23
105	The promoter of theArabidopsisPIN6 auxin transporter enabled strong expression in the vasculature of roots, leaves, floral stems and reproductive organs. Plant Signaling and Behavior, 2014, 9, e27898.	2.4	20
106	The Arabidopsis SAL1-PAP Pathway: A Case Study for Integrating Chloroplast Retrograde, Light and Hormonal Signaling in Modulating Plant Growth and Development?. Frontiers in Plant Science, 2018, 9, 1171.	3.6	20
107	A Novel Proteinase, SNOWY COTYLEDON4, Is Required for Photosynthetic Acclimation to Higher Light Intensities in Arabidopsis Â. Plant Physiology, 2013, 163, 732-745.	4.8	19
108	Nucleotide Sequence of a cDNA Clone Encoding 1-Aminocyclopropane-1-Carboxylic Acid Synthase from Broccoli. Plant Physiology, 1995, 108, 857-858.	4.8	18

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109	Decreased Photochemical Efficiency of Photosystem II following Sunlight Exposure of Shade-Grown Leaves of Avocado: Because of, or in Spite of, Two Kinetically Distinct Xanthophyll Cycles? Â. Plant Physiology, 2013, 161, 836-852.	4.8	18
110	Carotenoids in Photosynthesis. , 2004, , 245-249.		18
111	Deconvoluting apocarotenoidâ€mediated retrograde signaling networks regulating plastid translation and leaf development. Plant Journal, 2021, 105, 1582-1599.	5.7	17
112	Immunofluorescence localization of ?-amylase in the scutellum, germ aleurone and ?normal? aleurone of germinated barley grains. Protoplasma, 1989, 151, 128-136.	2.1	16
113	Probing functional and optical cross-sections of PSII in leaves during state transitions using fast repetition rate light induced fluorescence transients. Functional Plant Biology, 2019, 46, 567.	2.1	15
114	Do multiple forms of tomato fruit endopolygalacturonase exist in situ?. Postharvest Biology and Technology, 1993, 3, 17-26.	6.0	14
115	The global plant council: Increasing the impact of plant research to meet global challenges. Journal of Plant Biology, 2012, 55, 343-348.	2.1	13
116	Volatile apocarotenoid discovery and quantification in Arabidopsis thaliana: optimized sensitive analysis via HS-SPME-GC/MS. Metabolomics, 2019, 15, 79.	3.0	13
117	Isolation of the Plant Cytosolic Fraction for Proteomic Analysis. Methods in Molecular Biology, 2014, 1072, 453-467.	0.9	10
118	Development of strategies for genetic manipulation and fineâ€tuning of a chloroplast retrograde signal 3â€²â€phosphoadenosine 5â€²â€phosphate. Plant Direct, 2018, 2, e00031.	1.9	9
119	Excess Light Priming in Arabidopsis thaliana Genotypes with Altered DNA Methylomes. G3: Genes, Genomes, Genetics, 2019, 9, 3611-3621.	1.8	9
120	Identifying Photoprotection Mutants in <I>Arabidopsis thaliana</I>. , 2004, 274, 287-300.		8
121	Autophagy mutants show delayed chloroplast development during deâ€etiolation in carbon limiting conditions. Plant Journal, 2021, 108, 459-477.	5.7	6
122	Enzymes degraded under high light maintain proteostasis by transcriptional regulation inArabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2121362119.	7.1	6
123	Accumulation of the ?-subunit of polygalacturonase 1 in normal and mutant tomato fruit. Planta, 1993, 191, 71.	3.2	5
124	Identifying Chloroplast Biogenesis and Signalling Mutants in Arabidopsis thaliana. Methods in Molecular Biology, 2011, 684, 257-272.	0.9	5
125	Genetic suppression of plant development and chloroplast biogenesis via the Snowy Cotyledon 3 and Phytochrome B pathways. Functional Plant Biology, 2015, 42, 676.	2.1	5
126	Nucleotide Sequence of a cDNA Clone from Broccoli with High Identity with the PSST Subunit of NADH:Ubiquinone Oxidoreductase. Plant Physiology, 1995, 108, 859-860.	4.8	4

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127	Postharvest Senescence of Vegetables and its Regulation. , 2004, , 319-329.		4
128	A foliar pigment-based bioassay for interrogating chloroplast signalling revealed that carotenoid isomerisation regulates chlorophyll abundance. Plant Methods, 2022, 18, 18.	4.3	4
129	Systemic Photooxidative Stress Signalling. Signaling and Communication in Plants, 2013, , 251-274.	0.7	2
130	Detection and analysis of novel and known plant volatile apocarotenoids. Methods in Enzymology, 2022, , 311-368.	1.0	2
131	An Overview of Chloroplast Biogenesis and Development. , 2014, , 115-128.		1
132	The Plant CellIntroduces Breakthrough Reports: A New Forum for Cutting-Edge Plant Research. Plant Cell, 2015, , tpc.15.00862.	6.6	1
133	Characterization of Mutations Disrupting Carotenoid Biosynthesis in Arabidopsis Thaliana. , 1995, , 3039-3042.		0