Barry James Pogson

List of Publications by Citations

137 papers	11,331 citations	55 h-index	105 g-index
146 ext. papers	13,453 ext. citations	7.5 avg, IF	6.46 L-index

#	Paper	IF	Citations
137	Vitamin synthesis in plants: tocopherols and carotenoids. *Annual Review of Plant Biology*, **2006**, 57, 711-38	30.7	618
136	Carotenoid metabolism in plants. *Molecular Plant*, **2015**, 8, 68-82	14.4	578
135	Source to sink: regulation of carotenoid biosynthesis in plants. *Trends in Plant Science*, **2010**, 15, 266-74	13.1	548
134	Identification of the carotenoid isomerase provides insight into carotenoid biosynthesis, prolamellar body formation, and photomorphogenesis. *Plant Cell*, **2002**, 14, 321-32	11.6	373
133	Evidence for a SAL1-PAP chloroplast retrograde pathway that functions in drought and high light signaling in Arabidopsis. *Plant Cell*, **2011**, 23, 3992-4012	11.6	372
132	Carotenoid accumulation and function in seeds and non-green tissues. *Plant, Cell and Environment*, **2006**, 29, 435-45	8.4	339
131	Plastid signalling to the nucleus and beyond. *Trends in Plant Science*, **2008**, 13, 602-9	13.1	316
130	Learning the Languages of the Chloroplast: Retrograde Signaling and Beyond. *Annual Review of Plant Biology*, **2016**, 67, 25-53	30.7	312
129	Reconsidering plant memory: Intersections between stress recovery, RNA turnover, and epigenetics. *Science Advances*, **2016**, 2, e1501340	14.3	300
128	Arabidopsis carotenoid mutants demonstrate that lutein is not essential for photosynthesis in higher plants. *Plant Cell*, **1996**, 8, 1627-39	11.6	295
127	The absence of ALTERNATIVE OXIDASE1a in Arabidopsis results in acute sensitivity to combined light and drought stress. *Plant Physiology*, **2008**, 147, 595-610	6.6	292
126	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, 13324-9	11.5	275
125	Global changes in gene expression in response to high light in Arabidopsis. *Plant Physiology*, **2002**, 130, 1109-20	6.6	234
124	Remodeled respiration in ndufs4 with low phosphorylation efficiency suppresses Arabidopsis germination and growth and alters control of metabolism at night. *Plant Physiology*, **2009**, 151, 603-19	6.6	216
123	Systemic and intracellular responses to photooxidative stress in Arabidopsis. *Plant Cell*, **2007**, 19, 4091-110	11.6	190
122	Regulation of carotenoid composition and shoot branching in Arabidopsis by a chromatin modifying histone methyltransferase, SDG8. *Plant Cell*, **2009**, 21, 39-53	11.6	176
121	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	11.6	175

120	Photoprotection in a zeaxanthin- and lutein-deficient double mutant of Arabidopsis. *Photosynthesis Research*, **2001**, 67, 139-45	3.7	171
119	A rapid, non-invasive procedure for quantitative assessment of drought survival using chlorophyll fluorescence. *Plant Methods*, **2008**, 4, 27	5.8	167
118	Synthesis and Function of Apocarotenoid Signals in Plants. *Trends in Plant Science*, **2016**, 21, 792-803	13.1	166
117	Signaling from the endoplasmic reticulum activates brassinosteroid signaling and promotes acclimation to stress in Arabidopsis. *Science Signaling*, **2010**, 3, ra69	8.8	163
116	Hypoxia-responsive microRNAs and trans-acting small interfering RNAs in Arabidopsis. *Journal of Experimental Botany*, **2010**, 61, 165-77	7	151
115	Genetic dissection of chloroplast biogenesis and development: an overview. *Plant Physiology*, **2011**, 155, 1545-51	6.6	150
114	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, 269-81	8.4	149
113	The nucleotidase/phosphatase SAL1 is a negative regulator of drought tolerance in Arabidopsis. *Plant Journal*, **2009**, 58, 299-317	6.9	141
112	An Uncharacterized Apocarotenoid-Derived Signal Generated in ß-Carotene Desaturase Mutants Regulates Leaf Development and the Expression of Chloroplast and Nuclear Genes in Arabidopsis. *Plant Cell*, **2014**, 26, 2524-2537	11.6	130
111	Balancing metabolites in drought: the sulfur assimilation conundrum. *Trends in Plant Science*, **2013**, 18, 18-29	13.1	127
110	Insights into chloroplast biogenesis and development. *Biochimica Et Biophysica Acta - Bioenergetics*, **2015**, 1847, 1017-24	4.6	108
109	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, 14474-9	11.5	108
108	Genetic manipulation of carotenoid biosynthesis and photoprotection. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2000**, 355, 1395-403	5.8	108
107	Impact of chloroplastic- and extracellular-sourced ROS on high light-responsive gene expression in Arabidopsis. *Journal of Experimental Botany*, **2008**, 59, 121-33	7	105
106	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. *Journal of Experimental Botany*, **2017**, 68, 3129-3143	7	102
105	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	11.5	101
104	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, 973-84	4.6	101
103	Evolutionary Conservation of ABA Signaling for Stomatal Closure. *Plant Physiology*, **2017**, 174, 732-747	6.6	100

102	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, 363-76	3.8	96
101	Analgesia: morphine-pathway block in top1 poppies. *Nature*, **2004**, 431, 413-4	50.4	91
100	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	11.5	90
99	A chloroplast retrograde signal, 3'-phosphoadenosine 5'-phosphate, acts as a secondary messenger in abscisic acid signaling in stomatal closure and germination. *ELife*, **2017**, 6,	8.9	90
98	Chlorophyll biosynthesis. Expression of a second chl I gene of magnesium chelatase in Arabidopsis supports only limited chlorophyll synthesis. *Plant Physiology*, **2002**, 128, 770-9	6.6	87
97	Exploring the function-location nexus: using multiple lines of evidence in defining the subcellular location of plant proteins. *Plant Cell*, **2009**, 21, 1625-31	11.6	86
96	The Arabidopsis DNA Methylome Is Stable under Transgenerational Drought Stress. *Plant Physiology*, **2017**, 175, 1893-1912	6.6	82
95	TraitCapture: genomic and environment modelling of plant phenomic data. *Current Opinion in Plant Biology*, **2014**, 18, 73-9	9.9	82
94	Differential expression of two 1-aminocyclopropane-1-carboxylic acid oxidase genes in broccoli after harvest. *Plant Physiology*, **1995**, 108, 651-7	6.6	82
93	The Plant Cell Introduces Breakthrough Reports: A New Forum for Cutting-Edge Plant Research. *Plant Cell*, **2015**, tpc.15.00862	11.6	78
92	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	11.5	74
91	Ethylene responses in rice roots and coleoptiles are differentially regulated by a carotenoid isomerase-mediated abscisic acid pathway. *Plant Cell*, **2015**, 27, 1061-81	11.6	72
90	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	9.8	64
89	Rapid Recovery Gene Downregulation during Excess-Light Stress and Recovery in Arabidopsis. *Plant Cell*, **2017**, 29, 1836-1863	11.6	61
88	The cytoskeleton and the peroxisomal-targeted snowy cotyledon3 protein are required for chloroplast development in Arabidopsis. *Plant Cell*, **2010**, 22, 3423-38	11.6	59
87	Arabidopsis tRNA adenosine deaminase arginine edits the wobble nucleotide of chloroplast tRNAArg(ACG) and is essential for efficient chloroplast translation. *Plant Cell*, **2009**, 21, 2058-71	11.6	59
86	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	4.6	59
85	A simple chlorophyll fluorescence parameter that correlates with the rate coefficient of photoinactivation of photosystem II. *Photosynthesis Research*, **2005**, 84, 43-9	3.7	59

84	Transcriptional control of SET DOMAIN GROUP 8 and CAROTENOID ISOMERASE during Arabidopsis development. *Molecular Plant*, **2010**, 3, 174-91	14.4	57
83	Histone acetylation, VERNALIZATION INSENSITIVE 3, FLOWERING LOCUS C, and the vernalization response. *Molecular Plant*, **2009**, 2, 724-737	14.4	50
82	Regulation of lutein biosynthesis and prolamellar body formation in Arabidopsis. *Functional Plant Biology*, **2007**, 34, 663-672	2.7	50
81	Uncoupling High Light Responses from Singlet Oxygen Retrograde Signaling and Spatial-Temporal Systemic Acquired Acclimation. *Plant Physiology*, **2016**, 171, 1734-49	6.6	49
80	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, 41757-73	5.4	49
79	VERNALIZATION INSENSITIVE 3 (VIN3) is required for the response of Arabidopsis thaliana seedlings exposed to low oxygen conditions. *Plant Journal*, **2009**, 59, 576-87	6.9	48
78	Occurrence of the lutein-epoxide cycle in mistletoes of the Loranthaceae and Viscaceae. *Planta*, **2003**, 217, 868-79	4.7	48
77	A novel fry1 allele reveals the existence of a mutant phenotype unrelated to 5'->3' exoribonuclease (XRN) activities in Arabidopsis thaliana roots. *PLoS ONE*, **2011**, 6, e16724	3.7	48
76	Wheat drought tolerance in the field is predicted by amino acid responses to glasshouse-imposed drought. *Journal of Experimental Botany*, **2019**, 70, 4931-4948	7	46
75	The SCO2 protein disulphide isomerase is required for thylakoid biogenesis and interacts with LHCB1 chlorophyll a/b binding proteins which affects chlorophyll biosynthesis in Arabidopsis seedlings. *Plant Journal*, **2012**, 69, 743-54	6.9	46
74	Systemic and Local Responses to Repeated HL Stress-Induced Retrograde Signaling in Arabidopsis. *Frontiers in Plant Science*, **2012**, 3, 303	6.2	46
73	Chloroplast-to-nucleus communication: current knowledge, experimental strategies and relationship to drought stress signaling. *Plant Signaling and Behavior*, **2010**, 5, 1575-82	2.5	46
72	Quantification of cyclic electron flow around Photosystem I in spinach leaves during photosynthetic induction. *Photosynthesis Research*, **2007**, 94, 347-57	3.7	45
71	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, 25320-5	5.4	45
70	More than meets the eye: from carotenoid biosynthesis, to new insights into apocarotenoid signaling. *Current Opinion in Plant Biology*, **2015**, 27, 172-9	9.9	44
69	Reconsidering the nature and mode of action of metabolite retrograde signals from the chloroplast. *Frontiers in Plant Science*, **2012**, 3, 300	6.2	44
68	Comparative proteomics of high light stress in the model alga Chlamydomonas reinhardtii. *Proteomics*, **2006**, 6, 4309-20	4.8	43
67	A Mak-like kinase is a repressor of GAMYB in barley aleurone. *Plant Journal*, **2003**, 33, 707-17	6.9	42

66	Role of the Arabidopsis PIN6 auxin transporter in auxin homeostasis and auxin-mediated development. *PLoS ONE*, **2013**, 8, e70069	3.7	42
65	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	6.6	41
64	De novo synthesis and degradation of Lx and V cycle pigments during shade and sun acclimation in avocado leaves. *Plant Physiology*, **2009**, 149, 1179-95	6.6	38
63	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	12.7	37
62	The Transcription Factor MYB29 Is a Regulator of. *Plant Physiology*, **2017**, 173, 1824-1843	6.6	36
61	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, 1-24	2.7	35
60	A chromatin modifying enzyme, SDG8, is involved in morphological, gene expression, and epigenetic responses to mechanical stimulation. *Frontiers in Plant Science*, **2014**, 5, 533	6.2	33
59	Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. *Plant, Cell and Environment*, **2019**, 42, 2133-2150	8.4	32
58	Prospects for Carotenoid Biofortification Targeting Retention and Catabolism. *Trends in Plant Science*, **2020**, 25, 501-512	13.1	32
57	Carotenoids. *Advances in Botanical Research*, **2011**, 58, 1-36	2.2	31
56	Characterization of a cDNA encoding the protein moiety of a putative arabinogalactan protein from Lycopersicon esculentum. *Plant Molecular Biology*, **1995**, 28, 347-52	4.6	31
55	Molecular characterization and transcriptome analysis of orange head Chinese cabbage (Brassica rapa L. ssp. pekinensis). *Planta*, **2015**, 241, 1381-94	4.7	30
54	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, 985-1006	2.7	30
53	Using Phenomic Analysis of Photosynthetic Function for Abiotic Stress Response Gene Discovery. *The Arabidopsis Book*, **2016**, 14, e0185	3	30
52	Antisense inhibition of the beta-carotene hydroxylase enzyme in Arabidopsis and the implications for carotenoid accumulation, photoprotection and antenna assembly. *Photosynthesis Research*, **2001**, 67, 127-37	3.7	29
51	Consequences of Cool Storage of Broccoli on Physiological and Biochemical Changes and Subsequent Senescence at 20 °C. *Journal of the American Society for Horticultural Science*, **1997**, 122, 553-558	2.3	29
50	A GDSL Esterase/Lipase Catalyzes the Esterification of Lutein in Bread Wheat. *Plant Cell*, **2019**, 31, 3092-3112	11.6	28
49	From ecophysiology to phenomics: some implications of photoprotection and shade-sun acclimation in situ for dynamics of thylakoids in vitro. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2012**, 367, 3503-14	5.8	28

48	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	4.6	26
47	A -carotene derived apocarotenoid regulates etioplast and chloroplast development. *ELife*, **2020**, 9,	8.9	26
46	Promoting gene expression in plants by permissive histone lysine methylation. *Plant Signaling and Behavior*, **2009**, 4, 484-8	2.5	23
45	Maintenance of pre-existing DNA methylation states through recurring excess-light stress. *Plant, Cell and Environment*, **2018**, 41, 1657-1672	8.4	22
44	Potential implications for epigenetic regulation of carotenoid biosynthesis during root and shoot development. *Plant Signaling and Behavior*, **2009**, 4, 339-41	2.5	20
43	Addressing Research Bottlenecks to Crop Productivity. *Trends in Plant Science*, **2021**, 26, 607-630	13.1	20
42	Chloroplast Activity and 3'phosphadenosine 5'phosphate Signaling Regulate Programmed Cell Death in Arabidopsis. *Plant Physiology*, **2016**, 170, 1745-56	6.6	19
41	Effects of altered □and □branch carotenoid biosynthesis on photoprotection and whole-plant acclimation of Arabidopsis to photo-oxidative stress. *Plant, Cell and Environment*, **2013**, 36, 438-53	8.4	19
40	Inflorescence stem grafting made easy in Arabidopsis. *Plant Methods*, **2012**, 8, 50	5.8	19
39	Nucleotide sequence of a cDNA clone encoding 1-aminocyclopropane-1-carboxylic acid synthase from broccoli. *Plant Physiology*, **1995**, 108, 857-8	6.6	17
38	On the Occurrence and Structure of Subunits of Endopolygalacturonase Isoforms in Mature-Green and Ripening Tomato Fruits. *Functional Plant Biology*, **1991**, 18, 65	2.7	17
37	Genomic breeding for food, environment and livelihoods. *Food Security*, **2015**, 7, 375-382	6.7	16
36	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, 401-419	2.7	16
35	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?. *Plant Physiology*, **2013**, 161, 836-52	6.6	15
34	The promoter of the Arabidopsis PIN6 auxin transporter enabled strong expression in the vasculature of roots, leaves, floral stems and reproductive organs. *Plant Signaling and Behavior*, **2014**, 9, e27898	2.5	14
33	Suppression of glucan, water dikinase in the endosperm alters wheat grain properties, germination and coleoptile growth. *Plant Biotechnology Journal*, **2016**, 14, 398-408	11.6	13
32	The Role of Carotenoids in Energy Quenching **2005**, 515-537		13
31	Do multiple forms of tomato fruit endopolygalacturonase exist in situ?. *Postharvest Biology and Technology*, **1993**, 3, 17-26	6.2	13

30	Immunofluorescence localization of □amylase in the scutellum, germ aleurone and □ormal□ aleurone of germinated barley grains. *Protoplasma*, **1989**, 151, 128-136	3.4	13
29	RNA Polymerase II Read-Through Promotes Expression of Neighboring Genes in SAL1-PAP-XRN Retrograde Signaling. *Plant Physiology*, **2018**, 178, 1614-1630	6.6	12
28	A novel proteinase, SNOWY COTYLEDON4, is required for photosynthetic acclimation to higher light intensities in Arabidopsis. *Plant Physiology*, **2013**, 163, 732-45	6.6	11
27	The 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	6.2	11
26	Carotenoids. *Advances in Photosynthesis and Respiration*, **2007**, 315-334	1.7	10
25	Volatile apocarotenoid discovery and quantification in Arabidopsis thaliana: optimized sensitive analysis via HS-SPME-GC/MS. *Metabolomics*, **2019**, 15, 79	4.7	9
24	The global plant council: Increasing the impact of plant research to meet global challenges **2012**, 55, 343-348		9
23	Molecular and physiological responses during thermal acclimation of leaf photosynthesis and respiration in rice. *Plant, Cell and Environment*, **2020**, 43, 594-610	8.4	9
22	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, 567-583	2.7	9
21	Identifying photoprotection mutants in Arabidopsis thaliana. *Methods in Molecular Biology*, **2004**, 274, 287-99	1.4	8
20	Deconvoluting apocarotenoid-mediated retrograde signaling networks regulating plastid translation and leaf development. *Plant Journal*, **2021**, 105, 1582-1599	6.9	8
19	A Genome-Wide Association Study of Non-Photochemical Quenching in response to local seasonal climates in. *Plant Direct*, **2019**, 3, e00138	3.3	7
18	Isolation of the plant cytosolic fraction for proteomic analysis. *Methods in Molecular Biology*, **2014**, 1072, 453-67	1.4	7
17	Excess Light Priming in Genotypes with Altered DNA Methylomes. *G3: Genes, Genomes, Genetics*, **2019**, 9, 3611-3621	3.2	6
16	Identifying chloroplast biogenesis and signalling mutants in Arabidopsis thaliana. *Methods in Molecular Biology*, **2011**, 684, 257-72	1.4	5
15	Nucleotide sequence of a cDNA clone from broccoli with high identity with the PSST subunit of NADH:ubiquinone oxidoreductase. *Plant Physiology*, **1995**, 108, 859-60	6.6	4
14	Carotenoids **2018**, 57-91		4
13	Postharvest Senescence of Vegetables and its Regulation **2004**, 319-329		3

12	Accumulation of the subunit of polygalacturonase 1 in normal and mutant tomato fruit. *Planta*, **1993**, 191, 71	4.7	3
11	Development of strategies for genetic manipulation and fine-tuning of a chloroplast retrograde signal 3'-phosphoadenosine 5'-phosphate. *Plant Direct*, **2018**, 2, e00031	3.3	2
10	Genetic suppression of plant development and chloroplast biogenesis via the Snowy Cotyledon 3 and Phytochrome B pathways. *Functional Plant Biology*, **2015**, 42, 676-686	2.7	2
9	Systemic Photooxidative Stress Signalling. *Signaling and Communication in Plants*, **2013**, 251-274	1	2
8	Retrograde Control of Cytosolic Translation Targets Synthesis of Plastid Localized Proteins and Nuclear Responses for Efficient Light Acclimation		2
7	An Overview of Chloroplast Biogenesis and Development **2014**, 115-128		1
6	A cis-carotene derived apocarotenoid regulates etioplast and chloroplast development		1
5	Autophagy mutants show delayed chloroplast development during de-etiolation in carbon limiting conditions. *Plant Journal*, **2021**, 108, 459-477	6.9	1
4	A foliar pigment-based bioassay for interrogating chloroplast signalling revealed that carotenoid isomerisation regulates chlorophyll abundance.. *Plant Methods*, **2022**, 18, 18	5.8	0
3	Enzymes degraded under high light maintain proteostasis by transcriptional regulation in .. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2121362119	11.5	0
2	Carotenoids in Photosynthesis **2004**, 245-249		
1	Characterization of Mutations Disrupting Carotenoid Biosynthesis in Arabidopsis Thaliana **1995**, 3039-3042		