Barry J Shelp

List of Publications by Year
in descending order

71 papers	3,507 citations	126907 33 h-index	138484 58 g-index
71 all docs	71 docs citations	71 times ranked	3028 citing authors

#	Article	IF	Citations
1	Hypothesis/review: Contribution of putrescine to 4-aminobutyrate (GABA) production in response to abiotic stress. Plant Science, 2012, 193-194, 130-135.	3.6	247
2	GABA controls the level of quorum-sensing signal in Agrobacterium tumefaciens. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 7460-7464.	7.1	235
3	Plant GABA: Not Just a Metabolite. Trends in Plant Science, 2016, 21, 811-813.	8.8	181
4	Gamma-aminobutyrate: defense against invertebrate pests?. Trends in Plant Science, 2006, 11, 424-427.	8.8	148
5	Compartmentation of GABA metabolism raises intriguing questions. Trends in Plant Science, 2012, 17, 57-59.	8.8	119
6	Extracellular Î³-Aminobutyrate Mediates Communication between Plants and Other Organisms. Plant Physiology, 2006, 142, 1350-1352.	4.8	108
7	A Novel Î³-Hydroxybutyrate Dehydrogenase. Journal of Biological Chemistry, 2003, 278, 41552-41556.	3.4	105
8	Identification and characterization of GABA, proline and quaternary ammonium compound transporters fromArabidopsis thaliana. FEBS Letters, 1999, 450, 280-284.	2.8	104
9	Â-Hydroxybutyrate accumulation in Arabidopsis and tobacco plants is a general response to abiotic stress: putative regulation by redox balance and glyoxylate reductase isoforms. Journal of Experimental Botany, 2008, 59, 2555-2564.	4.8	104
10	Biochemical characterization, mitochondrial localization, expression, and potential functions for an Arabidopsis Î³-aminobutyrate transaminase that utilizes both pyruvate and glyoxylate. Journal of Experimental Botany, 2009, 60, 1743-1757.	4.8	104
11	Spermine Differentially Refines Plant Defense Responses Against Biotic and Abiotic Stresses. Frontiers in Plant Science, 2019, 10, 117.	3.6	97
12	4-Aminobutyrate (GABA): a metabolite and signal with practical significance. Botany, 2017, 95, 1015-1032.	1.0	95
13	Accumulation of Î³-aminobutyric acid in nodulated soybean in response to drought stress. Physiologia Plantarum, 1998, 102, 79-86.	5.2	88
14	Strategies and tools for studying the metabolism and function of Î³-aminobutyrate in plants. I.ÂPathway structure. Botany, 2012, 90, 651-668.	1.0	84
15	Role of plant glyoxylate reductases during stress: a hypothesis. Biochemical Journal, 2009, 423, 15-22.	3.7	82
16	Gaba shunt in developing soybean seeds is associated with hypoxia. Physiologia Plantarum, 1995, 94, 219-228.	5.2	77
17	Boron mobility in plants. Physiologia Plantarum, 1995, 94, 356-361.	5.2	77
18	Title is missing!. Molecular Breeding, 2003, 11, 277-285.	2.1	71

#	Article	IF	Citations
19	Subcellular localization and expression of multiple tomato Î³-aminobutyrate transaminases that utilize both pyruvate and glyoxylate. Journal of Experimental Botany, 2009, 60, 3255-3267.	4.8	63
20	Identification and characterization of a plastid-localized Arabidopsis glyoxylate reductase isoform: comparison with a cytosolic isoform and implications for cellular redox homeostasis and aldehyde detoxification. Journal of Experimental Botany, 2008, 59, 2545-2554.	4.8	60
21	Overexpression of glutamate decarboxylase in transgenic tobacco plants deters feeding by phytophagous insect larvae. Journal of Chemical Ecology, 2003, 29, 2177-2182.	1.8	59
22	Cold-shock-stimulated Î³-aminobutyric acid synthesis is mediated by an increase in cytosolic Ca²⁺, not by an increase in cytosolic H⁺. Canadian Journal of Botany, 1997, 75, 375-382.	1.1	58
23	Strategies and tools for studying the metabolism and function of Î³-aminobutyrate in plants. II.ÂIntegrated analysis. Botany, 2012, 90, 781-793.	1.0	56
24	Arabidopsis aldehyde dehydrogenase 10 family members confer salt tolerance through putrescine-derived 4-aminobutyrate (GABA) production. Scientific Reports, 2016, 6, 35115.	3.3	53
25	Î³-Aminobutyrate (GABA) Regulated Plant Defense: Mechanisms and Opportunities. Plants, 2021, 10, 1939.	3.5	53
26	The Production and Efflux of 4-Aminobutyrate in Isolated Mesophyll Cells. Plant Physiology, 1992, 99, 659-664.	4.8	51
27	Regulation of Î“ -aminobutyric acid synthesis in situ by glutamate availability. Physiologia Plantarum, 1999, 106, 363-369.	5.2	50
28	Oxidative metabolism is associated with physiological disorders in fruits stored under multiple environmental stresses. Plant Science, 2016, 245, 143-152.	3.6	50
29	Characteristics of an Arabidopsis glyoxylate reductase: general biochemical properties and substrate specificity for the recombinant protein, and developmental expression and implications for glyoxylate and succinic semialdehyde metabolism in planta. Canadian Journal of Botany, 2007, 85, 883-895.	1.1	43
30	Biochemical characterization of partially purified gaba:pyruvate transaminase from Nicotiana tabacum. Phytochemistry, 1999, 52, 575-581.	2.9	39
31	Targeted quantitative profiling of metabolites and gene transcripts associated with 4-aminobutyrate (GABA) in apple fruit stored under multiple abiotic stresses. Horticulture Research, 2018, 5, 61.	6.3	38
32	In situ [14C]Glutamate Metabolism by Developing Soybean Cotyledons I. Metabolic Routes. Journal of Plant Physiology, 1994, 143, 1-7.	3.5	36
33	Allele Mining of Exotic Maize Germplasm to Enhance Macular Carotenoids. Crop Science, 2011, 51, 991-1004.	1.8	36
34	Apple Fruit Copper Amine Oxidase Isoforms: Peroxisomal MdAO1 Prefers Diamines as Substrates, Whereas Extracellular MdAO2 Exclusively Utilizes Monoamines. Plant and Cell Physiology, 2015, 56, 137-147.	3.1	36
35	Fluctuations of Î³-aminobutyrate, Î³-hydroxybutyrate, and related amino acids in Arabidopsis leaves as a function of the lightâ€“dark cycle, leaf age, and N stressEditorial decisions for this paper were made by Robert Ireland, Associate Editor, Canadian Journal of Botany.. Canadian Journal of Botany, 2006, 84, 1339-1346.	1.1	34
36	Nitrogen use efficiency: re-consideration of the bioengineering approach. Botany, 2010, 88, 103-109.	1.0	34

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37	Glyoxylate Reductase Isoform 1 is Localized in the Cytosol and Not Peroxisomes in Plant Cells. Journal of Integrative Plant Biology, 2012, 54, 152-168.	8.5	33
38	Does the GABA Shunt Regulate Cytosolic GABA?. Trends in Plant Science, 2020, 25, 422-424.	8.8	32
39	Towards an understanding of how phloem amino acid composition shapes elevated CO₂â€induced changes in aphid population dynamics. Ecological Entomology, 2015, 40, 247-257.	2.2	27
40	Impact of 1-methylcyclopropene and controlled atmosphere storage on polyamine and 4-aminobutyrate levels in Ã¢â,¬Å“EmpireÃ¢â,¬Â•apple fruit. Frontiers in Plant Science, 2014, 5, 144.	3.6	26
41	Phloem phytochemistry and aphid responses to elevated <scp>CO₂</scp>, nitrogen fertilization and endophyte infection. Agricultural and Forest Entomology, 2014, 16, 273-283.	1.3	25
42	In situ [14C] Glutamate Metabolism by Developing Soybean Cotyledons II. The Importance of Glutamate Decarboxylation. Journal of Plant Physiology, 1996, 147, 714-720.	3.5	23
43	Detoxification of succinate semialdehyde in <i>Arabidopsis</i> glyoxylate reductase and NAD kinase mutants subjected to submergence stress. Botany, 2012, 90, 51-61.	1.0	23
44	Subcellular compartmentation of 4-aminobutyrate (GABA) metabolism in arabidopsis: An update. Plant Signaling and Behavior, 2017, 12, e1322244.	2.4	23
45	Identification of the full-length Hs1pro-1 coding sequence and preliminary evaluation of soybean cyst nematode resistance in soybean transformed with Hs1pro-1 cDNA. Canadian Journal of Botany, 2007, 85, 437-441.	1.1	22
46	Metabolic Alterations in Postharvest Pear Fruit As Influenced by 1-Methylcyclopropene and Controlled Atmosphere Storage. Journal of Agricultural and Food Chemistry, 2018, 66, 12989-12999.	5.2	22
47	Salinity-regulated expression of genes involved in GABA metabolism and signaling. Botany, 2017, 95, 621-627.	1.0	21
48	Plant Glyoxylate/Succinic Semialdehyde Reductases: Comparative Biochemical Properties, Function during Chilling Stress, and Subcellular Localization. Frontiers in Plant Science, 2017, 8, 1399.	3.6	21
49	Î³-Aminobutyrate transaminase limits the catabolism of Î³-aminobutyrate in cold-stressed Arabidopsis plants: insights from an overexpression mutant. Botany, 2010, 88, 522-527.	1.0	19
50	Review: Improving nitrogen use efficiency of potted chrysanthemum: Strategies and benefits. Canadian Journal of Plant Science, 2013, 93, 1009-1016.	0.9	19
51	NAD⁺â€aminoaldehyde dehydrogenase candidates for 4â€aminobutyrate (GABA) and Î²â€alanine production during terminal oxidation of polyamines in apple fruit. FEBS Letters, 2015, 589, 2695-2700.	2.8	19
52	Spermine Is a Potent Plant Defense Activator Against Gray Mold Disease on <i>Solanum lycopersicum</i>, <i>Phaseolus vulgaris</i>, and <i>Arabidopsis thaliana</i>. Phytopathology, 2019, 109, 1367-1377.	2.2	19
53	Kinetic mechanism of a recombinant Arabidopsis glyoxylate reductase: studies of initial velocity, dead-end inhibition and product inhibition. Canadian Journal of Botany, 2007, 85, 896-902.	1.1	15
54	Effects of elevated CO2 and 1-methylcyclopropene on storage-related disorders of Ontario-grown Empire apples. Canadian Journal of Plant Science, 2014, 94, 857-865.	0.9	15

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55	Controlled atmosphere-related injury in â€˜Honeycrispâ€™ apples is associated with Î³-aminobutyrate accumulation. Canadian Journal of Plant Science, 2015, 95, 879-886.	0.9	15
56	Ancient Plant Glyoxylate/Succinic Semialdehyde Reductases: GLYR1s Are Cytosolic, Whereas GLYR2s Are Localized to Both Mitochondria and Plastids. Frontiers in Plant Science, 2017, 8, 601.	3.6	15
57	Does long-distance GABA signaling via the phloem really occur?. Botany, 2012, 90, 897-900.	1.0	13
58	Identification of catalytically important amino acid residues for enzymatic reduction of glyoxylate in plants. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2013, 1834, 2663-2671.	2.3	11
59	Development and Utilization of High Carotenoid Maize Germplasm: Proof of Concept. Crop Science, 2013, 53, 554-563.	1.8	11
60	Impact of various combinations of nitrate and chloride on nitrogen remobilization in potted chrysanthemum grown in a subirrigation system. Canadian Journal of Plant Science, 2014, 94, 643-657.	0.9	10
61	Strategic timing and rate of sulphur fertilization improves sulphur use efficiency in subirrigated greenhouse-grown chrysanthemums. Canadian Journal of Plant Science, 2019, 99, 654-665.	0.9	9
62	Effect of boron nutrition on American ginseng in field and in nutrient cultures. Journal of Ginseng Research, 2014, 38, 73-77.	5.7	7
63	Strategic timing and rate of phosphorus fertilization improves phosphorus-use efficiency in two contrasting cultivars of subirrigated greenhouse-grown chrysanthemum. Canadian Journal of Plant Science, 2020, 100, 264-275.	0.9	7
64	Î³-Aminobutyrate Improves the Postharvest Marketability of Horticultural Commodities: Advances and Prospects. Frontiers in Plant Science, 2022, 13, .	3.6	7
65	Polyamine homeostasis in apple fruit stored under multiple abiotic stresses. Canadian Journal of Plant Science, 2019, 99, 88-92.	0.9	6
66	1-Methylcyclopropene affects the shelf-life quality of controlled atmosphere stored â€˜Cold Snapâ„¢â€™ pears. Canadian Journal of Plant Science, 2018, 98, 1365-1375.	0.9	4
67	Further optimization of macronutrient delivery for subirrigated greenhouse-grown chrysanthemums: calcium and magnesium. Canadian Journal of Plant Science, 2021, 101, 129-134.	0.9	4
68	Commercial validation of a modified method for delivering low nitrogen, phosphorus, and potassium inputs to greenhouse-grown subirrigated pot chrysanthemums. Canadian Journal of Plant Science, 2021, 101, 962-966.	0.9	4
69	Impact of 1-methylcyclopropene and controlled atmosphere on the quality of stored â€˜AC Harrow Crispâ€™ pears. Canadian Journal of Plant Science, 2017, , .	0.9	2
70	Optimizing manganese and iron delivery for contrasting cultivars of subirrigated greenhouse-grown pot chrysanthemums. Canadian Journal of Plant Science, 2022, 102, 823-834.	0.9	2
71	Impact of : ratio and nitrogen supply on nitrogen remobilization in potted chrysanthemum grown in a subirrigation system. Canadian Journal of Plant Science, 2014, 94, 867-880.	0.9	1