Benoit St-Pierre

List of Publications by Year
in descending order

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66

papers

4,144

citations

147801

31

h-index

114465

63

g-index

67

all docs

67

docs citations

67

times ranked

2909

citing authors

#	Article	IF	Citations
1	The cell and developmental biology of alkaloid biosynthesis. Trends in Plant Science, 2000, 5, 168-173.	8.8	317
2	Multicellular Compartmentation of Catharanthus roseus Alkaloid Biosynthesis Predicts Intercellular Translocation of a Pathway Intermediate. Plant Cell, 1999, 11, 887-900.	6.6	306
3	Indole alkaloid biosynthesis in Catharanthus roseus: new enzyme activities and identification of cytochrome P450 CYP72A1 as secologanin synthase. Plant Journal, 2000, 24, 797-804.	5.7	252
4	The terminal O-acetyltransferase involved in vindoline biosynthesis defines a new class of proteins responsible for coenzyme A-dependent acyl transfer. Plant Journal, 1998, 14, 703-713.	5.7	242
5	Co-expression of three MEP pathway genes andgeraniol 10-hydroxylasein internal phloem parenchyma ofCatharanthus roseusimplicates multicellular translocation of intermediates during the biosynthesis of monoterpene indole alkaloids and isoprenoid-derived primary metabolites. Plant Journal, 2004, 38, 131-141.	5.7	195
6	Indole alkaloid biosynthesis in <i>Catharanthus roseus</i>: new enzyme activities and identification of cytochrome P450 CYP72A1 as secologanin synthase. Plant Journal, 2000, 24, 797-804.	5.7	190
7	Evolution of Acyltransferase Genes: Origin and Diversification of the BAHD Superfamily of Acyltransferases Involved in Secondary Metabolism. Recent Advances in Phytochemistry, 2000, 34, 285-315.	0.5	175
8	A look inside an alkaloid multisite plant: the Catharanthus logistics. Current Opinion in Plant Biology, 2014, 19, 43-50.	7.1	135
9	Strictosidine activation in Apocynaceae: towards a "nuclear time bomb"?. BMC Plant Biology, 2010, 10, 182.	3.6	129
10	Characterization of the plastidial geraniol synthase from Madagascar periwinkle which initiates the monoterpenoid branch of the alkaloid pathway in internal phloem associated parenchyma. Phytochemistry, 2013, 85, 36-43.	2.9	123
11	Optimization of the transient transformation of Catharanthus roseus cells by particle bombardment and its application to the subcellular localization of hydroxymethylbutenyl 4-diphosphate synthase and geraniol 10-hydroxylase. Plant Cell Reports, 2009, 28, 1215-1234.	5.6	105
12	Spatial distribution and hormonal regulation of gene products from methyl erythritol phosphate and monoterpene-secoiridoid pathways in Catharanthus roseus. Plant Molecular Biology, 2007, 65, 13-30.	3.9	103
13	Can Arabidopsis make complex alkaloids?. Trends in Plant Science, 2004, 9, 116-122.	8.8	101
14	CrMYC1, a Catharanthus roseus elicitor- and jasmonate-responsive bHLH transcription factor that binds the G-box element of the strictosidine synthase gene promoter. Journal of Experimental Botany, 2003, 54, 2587-2588.	4.8	97
15	A Pair of Tabersonine 16-Hydroxylases Initiates the Synthesis of Vindoline in an Organ-Dependent Manner in<i>Catharanthus roseus</i>Â Â Â. Plant Physiology, 2013, 163, 1792-1803.	4.8	97
16	Phytochemical genomics of the Madagascar periwinkle: Unravelling the last twists of the alkaloid engine. Phytochemistry, 2015, 113, 9-23.	2.9	92
17	Molecular and Biochemical Analysis of a Madagascar Periwinkle Root-Specific Minovincinine-19-Hydroxy-O-Acetyltransferase. Plant Physiology, 2001, 125, 189-198.	4.8	91
18	Stra13 Homodimers Repress Transcription through Class B E-box Elements. Journal of Biological Chemistry, 2002, 277, 46544-46551.	3.4	89

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19	Synthesis and trafficking of alkaloid biosynthetic enzymes. Current Opinion in Plant Biology, 2005, 8, 657-666.	7.1	88
20	Spatial organization of the vindoline biosynthetic pathway in Catharanthus roseus. Journal of Plant Physiology, 2011, 168, 549-557.	3.5	76
21	Cellular and sub-cellular organisation of the monoterpenoid indole alkaloid pathway in Catharanthus roseus. Phytochemistry Reviews, 2007, 6, 363-381.	6.5	69
22	Epidermis is a pivotal site of at least four secondary metabolic pathways in Catharanthus roseus aerial organs. Planta, 2006, 223, 1191-1200.	3.2	68
23	Characterization of a spermidine hydroxycinnamoyltransferase in<i>Malus domestica</i>highlights the evolutionary conservation of trihydroxycinnamoyl spermidines in pollen coat of core Eudicotyledons. Journal of Experimental Botany, 2015, 66, 7271-7285.	4.8	62
24	A single gene encodes isopentenyl diphosphate isomerase isoforms targeted to plastids, mitochondria and peroxisomes in Catharanthus roseus. Plant Molecular Biology, 2012, 79, 443-459.	3.9	60
25	Jasmonate-induced epoxidation of tabersonine by a cytochrome P-450 in hairy root cultures of Catharanthus roseus. Phytochemistry, 2003, 64, 401-409.	2.9	58
26	The subcellular organization of strictosidine biosynthesis in <i>Catharanthusâ€ƒroseus</i> epidermis highlights several transâ€tonoplast translocations of intermediate metabolites. FEBS Journal, 2011, 278, 749-763.	4.7	58
27	Characterization of a second secologanin synthase isoform producing both secologanin and secoxyloganin allows enhanced de novo assembly of a Catharanthus roseus transcriptome. BMC Genomics, 2015, 16, 619.	2.8	54
28	Occurrence of a copia-like transposable element in one of the introns of the potato starch phosphorylase gene. Molecular Genetics and Genomics, 1990, 224, 33-39.	2.4	53
29	A <scp>BAHD</scp> acyltransferase catalyzing 19â€<i>O</i>â€acetylation of tabersonine derivatives in roots of <i>Catharanthus roseus</i> enables combinatorial synthesis of monoterpene indole alkaloids. Plant Journal, 2018, 94, 469-484.	5.7	46
30	Class II Cytochrome P450 Reductase Governs the Biosynthesis of Alkaloids. Plant Physiology, 2016, 172, 1563-1577.	4.8	44
31	CaaX-prenyltransferases are essential for expression of genes involvedin the early stages of monoterpenoid biosynthetic pathwayin Catharanthus roseus cells. Plant Molecular Biology, 2005, 57, 855-870.	3.9	40
32	Folivory elicits a strong defense reaction in Catharanthus roseus: metabolomic and transcriptomic analyses reveal distinct local and systemic responses. Scientific Reports, 2017, 7, 40453.	3.3	39
33	Two Tabersonine 6,7-Epoxidases Initiate Lochnericine-Derived Alkaloid Biosynthesis in Catharanthus roseus. Plant Physiology, 2018, 177, 1473-1486.	4.8	34
34	Light activation of vindoline biosynthesis does not require cytomorphogenesis in Catharanthus roseus seedlings. Phytochemistry, 2000, 55, 531-536.	2.9	32
35	Characterisation of CaaX-prenyltransferases in Catharanthus roseus: relationships with the expression of genes involved in the early stages of monoterpenoid biosynthetic pathway. Plant Science, 2005, 168, 1097-1107.	3.6	27
36	Functional analysis of the DAT gene promoter using transient Catharanthus roseus and stable Nicotiana tabacum transformation systems. Plant Cell Reports, 2011, 30, 1173-1182.	5.6	27

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37	Induction of the plastidic starch-phosphorylase gene in potato storage sink tissue. Planta, 1995, 195, 339.	3.2	24
38	Subcellular evidence for the involvement of peroxisomes in plant isoprenoid biosynthesis. Plant Signaling and Behavior, 2011, 6, 2044-2046.	2.4	24
39	Enhanced bioproduction of anticancer precursor vindoline by yeast cell factories. Microbial Biotechnology, 2021, 14, 2693-2699.	4.2	24
40	Biosynthesis and Regulation of Alkaloids. , 2010, , 139-160.		22
41	Deciphering the Evolution, Cell Biology and Regulation of Monoterpene Indole Alkaloids. Advances in Botanical Research, 2013, 68, 73-109.	1.1	22
42	Proteins prenylated by type I protein geranylgeranyltransferase act positively on the jasmonate signalling pathway triggering the biosynthesis of monoterpene indole alkaloids in Catharanthus roseus. Plant Cell Reports, 2009, 28, 83-93.	5.6	21
43	Purification, molecular cloning, and cell-specific gene expression of the alkaloid-accumulation associated protein CrPS in Catharanthus roseus. Journal of Experimental Botany, 2005, 56, 1221-1228.	4.8	20
44	Cellular and Subcellular Compartmentation of the 2C-Methyl-D-Erythritol 4-Phosphate Pathway in the Madagascar Periwinkle. Plants, 2020, 9, 462.	3.5	19
45	Alternative splicing creates a pseudo-strictosidine Î²-<scp>d</scp>-glucosidase modulating alkaloid synthesis in <i>Catharanthus roseus</i>. Plant Physiology, 2021, 185, 836-856.	4.8	19
46	Molecular cloning and functional characterization of Catharanthus roseus hydroxymethylbutenyl 4-diphosphate synthase gene promoter from the methyl erythritol phosphate pathway. Molecular Biology Reports, 2012, 39, 5433-5447.	2.3	17
47	Virus-induced gene silencing in Rauwolfia species. Protoplasma, 2017, 254, 1813-1818.	2.1	15
48	Virus-induced gene silencing of the two squalene synthase isoforms of apple tree (MalusÂÃ—Âdomestica) Tj ETQq0 0 0 rgBT /Overlock 1 45-60.	3.2	15
49	ZCT1 and ZCT2 transcription factors repress the activity of a gene promoter from the methyl erythritol phosphate pathway in Madagascar periwinkle cells. Journal of Plant Physiology, 2014, 171, 1510-1513.	3.5	14
50	Triple subcellular targeting of isopentenyl diphosphate isomerases encoded by a single gene. Plant Signaling and Behavior, 2012, 7, 1495-1497.	2.4	13
51	High expression during neurogenesis but not mammogenesis of a murine homologue of the Deleted in Breast Cancer2/Rhobtb2 tumor suppressor. Gene Expression Patterns, 2004, 5, 245-251.	0.8	10
52	Genome-wide identification and biochemical characterization of the UGT88F subfamily in Malus x domestica Borkh. Phytochemistry, 2019, 157, 135-144.	2.9	10
53	UPLC-HRMS Analysis Revealed the Differential Accumulation of Antioxidant and Anti-Aging Lignans and Neolignans in In Vitro Cultures of Linum usitatissimum L. Frontiers in Plant Science, 2020, 11, 508658.	3.6	10
54	The effects of salicylates on phenomena related to crown gall. Canadian Journal of Botany, 1984, 62, 729-734.	1.1	9

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55	The starch phosphorylase gene is subjected to different modes of regulation in starch-containing tissues of potato. Plant Molecular Biology, 1996, 30, 1087-1098.	3.9	9
56	Expression pattern of AtABCC13/MRP11 reveals developmental, hormonal, and nutritional regulations. Biologia Plantarum, 2014, 58, 231-240.	1.9	9
57	Dynamic regulation of the Stra13/Sharp/Dec bHLH repressors in mammary epithelium. Developmental Dynamics, 2004, 230, 124-130.	1.8	8
58	Growth of nopaline-utilizing <i>Agrobacterium</i> and <i>Pseudomonas</i> in extracts of crown-gall tumors. Canadian Journal of Microbiology, 1988, 34, 793-801.	1.7	7
59	Cycloheximide as a tool to investigate protein import in peroxisomes: A case study of the subcellular localization of isoprenoid biosynthetic enzymes. Journal of Plant Physiology, 2012, 169, 825-829.	3.5	7
60	Exploiting Spermidine <i>N</i>-Hydroxycinnamoyltransferase Diversity and Substrate Promiscuity to Produce Various Trihydroxycinnamoyl Spermidines and Analogues in Engineered Yeast. ACS Synthetic Biology, 2021, 10, 286-296.	3.8	6
61	5â€² deletion analysis of the potato starch phosphorylase gene: an upstream sequence defines distal regulatory elements and a proximal organ-dependent promoter. Plant Science, 1995, 110, 193-203.	3.6	4
62	Vacuole-Targeted Proteins: Ins and Outs of Subcellular Localization Studies. Methods in Molecular Biology, 2018, 1789, 33-54.	0.9	4
63	Isolation of a cDNA encoding the alpha-subunit of CAAX-prenyltransferases from Catharanthus roseus and the expression of the active recombinant protein farnesyltransferase. Cellular and Molecular Biology Letters, 2005, 10, 649-57.	7.0	3
64	Indole Alkaloid Biosynthesis in Catharanthus roseus: The Establishment of a Model System. , 1998, , 171-187.		2
65	ALSV-Based Virus-Induced Gene Silencing in Apple Tree (MalusÂÃ—Âdomestica L.). Methods in Molecular Biology, 2020, 2172, 183-197.	0.9	2
66	Identification of a human ABCC10 orthologue in Catharanthus roseus reveals a U12-type intron determinant for the N-terminal domain feature. Journal of Genetics, 2014, 93, 21-33.	0.7	1