Vincent Courdavault

List of Publications by Year
in descending order

#	Article	IF	Citations
1	De novo production of the plant-derived alkaloid strictosidine in yeast. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3205-3210.	7.1	373
2	An alternative route to cyclic terpenes by reductive cyclization in iridoid biosynthesis. Nature, 2012, 492, 138-142.	27.8	298
3	Missing enzymes in the biosynthesis of the anticancer drug vinblastine in Madagascar periwinkle. Science, 2018, 360, 1235-1239.	12.6	279
4	Emerging and Emerged Pathogenic Candida Species: Beyond the Candida albicans Paradigm. PLoS Pathogens, 2013, 9, e1003550.	4.7	219
5	A look inside an alkaloid multisite plant: the Catharanthus logistics. Current Opinion in Plant Biology, 2014, 19, 43-50.	7.1	135
6	Strictosidine activation in Apocynaceae: towards a "nuclear time bomb"?. BMC Plant Biology, 2010, 10, 182.	3.6	129
7	Peroxisomal localisation of the final steps of the mevalonic acid pathway in planta. Planta, 2011, 234, 903-914.	3.2	126
8	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
9	An NPF transporter exports a central monoterpene indole alkaloid intermediate from the vacuole. Nature Plants, 2017, 3, 16208.	9.3	123
10	A three enzyme system to generate the Strychnos alkaloid scaffold from a central biosynthetic intermediate. Nature Communications, 2017, 8, 316.	12.8	117
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	Unlocking the Diversity of Alkaloids in Catharanthus roseus: Nuclear Localization Suggests Metabolic Channeling in Secondary Metabolism. Chemistry and Biology, 2015, 22, 336-341.	6.0	103
14	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
15	Phytochemical genomics of the Madagascar periwinkle: Unravelling the last twists of the alkaloid engine. Phytochemistry, 2015, 113, 9-23.	2.9	92
16	Structural investigation of heteroyohimbine alkaloid synthesis reveals active site elements that control stereoselectivity. Nature Communications, 2016, 7, 12116.	12.8	85
17	Spatial organization of the vindoline biosynthetic pathway in Catharanthus roseus. Journal of Plant Physiology, 2011, 168, 549-557.	3.5	76
18	Ranking genome-wide correlation measurements improves microarray and RNA-seq based global and targeted co-expression networks. Scientific Reports, 2018, 8, 10885.	3.3	73

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19	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
20	Hybrid histidine kinases in pathogenic fungi. Molecular Microbiology, 2015, 95, 914-924.	2.5	68
21	Antifungal Activity of Resveratrol Derivatives against <i>Candida</i> Species. Journal of Natural Products, 2014, 77, 1658-1662.	3.0	67
22	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
23	Candida guilliermondii: biotechnological applications, perspectives for biological control, emerging clinical importance and recent advances in genetics. Current Genetics, 2013, 59, 73-90.	1.7	61
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	Biosynthetic Origin of <i>E</i>-Resveratrol Accumulation in Grape Canes during Postharvest Storage. Journal of Agricultural and Food Chemistry, 2015, 63, 1631-1638.	5.2	59
26	Molecular evolution of parsnip (<i>Pastinaca sativa</i>) membraneâ€bound prenyltransferases for linear and/or angular furanocoumarin biosynthesis. New Phytologist, 2016, 211, 332-344.	7.3	59
27	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
28	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
29	Discovery of a P450-catalyzed step in vindoline biosynthesis: a link between the aspidosperma and eburnamine alkaloids. Chemical Communications, 2015, 51, 7626-7628.	4.1	50
30	Sarpagan bridge enzyme has substrate-controlled cyclization and aromatization modes. Nature Chemical Biology, 2018, 14, 760-763.	8.0	50
31	Metabolic engineering for plant natural products biosynthesis: new procedures, concrete achievements and remaining limits. Natural Product Reports, 2021, 38, 2145-2153.	10.3	48
32	Regulation of the terpene moiety biosynthesis of Catharanthus roseus terpene indole alkaloids. Phytochemistry Reviews, 2007, 6, 341-351.	6.5	46
33	The subcellular localization of periwinkle farnesyl diphosphate synthase provides insight into the role of peroxisome in isoprenoid biosynthesis. Journal of Plant Physiology, 2011, 168, 2110-2116.	3.5	46
34	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
35	Class II Cytochrome P450 Reductase Governs the Biosynthesis of Alkaloids. Plant Physiology, 2016, 172, 1563-1577.	4.8	44
36	Beyond the semi-synthetic artemisinin: metabolic engineering of plant-derived anti-cancer drugs. Current Opinion in Biotechnology, 2020, 65, 17-24.	6.6	42

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37	The Identification of Phytohormone Receptor Homologs in Early Diverging Fungi Suggests a Role for Plant Sensing in Land Colonization by Fungi. MBio, 2017, 8, .	4.1	41
38	Field-Based Metabolomics of Vitis vinifera L. Stems Provides New Insights for Genotype Discrimination and Polyphenol Metabolism Structuring. Frontiers in Plant Science, 2018, 9, 798.	3.6	41
39	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
40	Disruption of Protein Mannosylation Affects Candida guilliermondii Cell Wall, Immune Sensing, and Virulence. Frontiers in Microbiology, 2016, 7, 1951.	3.5	40
41	Mechanical stress rapidly induces E-resveratrol and E-piceatannol biosynthesis in grape canes stored as a freshly-pruned byproduct. Food Chemistry, 2018, 240, 1022-1027.	8.2	40
42	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
43	Towards the Microbial Production of Plant-Derived Anticancer Drugs. Trends in Cancer, 2020, 6, 444-448.	7.4	38
44	Identifying Missing Biosynthesis Enzymes of Plant Natural Products. Trends in Pharmacological Sciences, 2020, 41, 142-146.	8.7	37
45	Innovative Tools and Strategies for Optimizing Yeast Cell Factories. Trends in Biotechnology, 2021, 39, 488-504.	9.3	37
46	Marine drugs: Biology, pipelines, current and future prospects for production. Biotechnology Advances, 2022, 54, 107871.	11.7	37
47	Characterization and subcellular localization of geranylgeranyl diphosphate synthase from Catharanthus roseus. Molecular Biology Reports, 2012, 39, 3235-3243.	2.3	34
48	Two Tabersonine 6,7-Epoxidases Initiate Lochnericine-Derived Alkaloid Biosynthesis in Catharanthus roseus. Plant Physiology, 2018, 177, 1473-1486.	4.8	34
49	Drug-resistant cassettes for the efficient transformation of Candida guilliermondiiâ€ƒwild-type strains. FEMS Yeast Research, 2011, 11, 457-463.	2.3	30
50	Deus ex Candida genetics: overcoming the hurdles for the development of a molecular toolbox in the CTG clade. Microbiology (United Kingdom), 2012, 158, 585-600.	1.8	29
51	Diversity and Evolution of Sensor Histidine Kinases in Eukaryotes. Genome Biology and Evolution, 2019, 11, 86-108.	2.5	28
52	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
53	CHASE-Containing Histidine Kinase Receptors in Apple Tree: From a Common Receptor Structure to Divergent Cytokinin Binding Properties and Specific Functions. Frontiers in Plant Science, 2017, 8, 1614.	3.6	27
54	More than a Catharanthus plant: A multicellular and pluri-organelle alkaloid-producing factory. Current Opinion in Plant Biology, 2022, 67, 102200.	7.1	27

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55	Composition and Tissue-Specific Distribution of Stilbenoids in Grape Canes Are Affected by Downy Mildew Pressure in the Vineyard. Journal of Agricultural and Food Chemistry, 2015, 63, 8472-8477.	5.2	26
56	Improved gene co-expression network quality through expression dataset down-sampling and network aggregation. Scientific Reports, 2019, 9, 14431.	3.3	26
57	Vineyard evaluation of stilbenoidâ€rich grape cane extracts against downy mildew: a largeâ€scale study. Pest Management Science, 2019, 75, 1252-1257.	3.4	25
58	Subcellular evidence for the involvement of peroxisomes in plant isoprenoid biosynthesis. Plant Signaling and Behavior, 2011, 6, 2044-2046.	2.4	24
59	Functional Divergence of Poplar Histidine-Aspartate Kinase HK1 Paralogs in Response to Osmotic Stress. International Journal of Molecular Sciences, 2016, 17, 2061.	4.1	24
60	Enhanced bioproduction of anticancer precursor vindoline by yeast cell factories. Microbial Biotechnology, 2021, 14, 2693-2699.	4.2	24
61	Biosynthesis and Regulation of Alkaloids. , 2010, , 139-160.		22
62	Deciphering the Evolution, Cell Biology and Regulation of Monoterpene Indole Alkaloids. Advances in Botanical Research, 2013, 68, 73-109.	1.1	22
63	Biotechnological potential of the fungal CTG clade species in the synthetic biology era. Trends in Biotechnology, 2014, 32, 167-168.	9.3	22
64	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
65	Efficient gene targeting in a Candida guilliermondii non-homologous end-joining pathway-deficient strain. Biotechnology Letters, 2013, 35, 1035-1043.	2.2	21
66	Improved virus-induced gene silencing allows discovery of a serpentine synthase gene in <i>Catharanthus roseus</i>. Plant Physiology, 2021, 187, 846-857.	4.8	20
67	Fluorescent protein fusions in Candida guilliermondii. Fungal Genetics and Biology, 2011, 48, 1004-1011.	2.1	19
68	Characterization of histidineâ€aspartate kinase <scp>HK1</scp> and identification of histidine phosphotransfer proteins as potential partners in a <i>Populus</i> multistep phosphorelay. Physiologia Plantarum, 2013, 149, 188-199.	5.2	19
69	Illuminating Fungal Infections with Bioluminescence. PLoS Pathogens, 2014, 10, e1004179.	4.7	19
70	A standardized toolkit for genetic engineering of CTG clade yeasts. Journal of Microbiological Methods, 2018, 144, 152-156.	1.6	19
71	Synthesis of (â^')-Melodinine K: A Case Study of Efficiency in Natural Product Synthesis. Journal of Natural Products, 2020, 83, 2425-2433.	3.0	19
72	Cellular and Subcellular Compartmentation of the 2C-Methyl-D-Erythritol 4-Phosphate Pathway in the Madagascar Periwinkle. Plants, 2020, 9, 462.	3.5	19

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73	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
74	Peroxisomes: A New Hub for Metabolic Engineering in Yeast. Frontiers in Bioengineering and Biotechnology, 2021, 9, 659431.	4.1	18
75	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
76	Yeasts as Biopharmaceutical Production Platforms. Frontiers in Fungal Biology, 2021, 2, .	2.0	17
77	Characterization of an autonomously replicating sequence in Candida guilliermondii. Microbiological Research, 2013, 168, 580-588.	5.3	16
78	Virusâ€‐induced gene silencing in <i>Catharanthus roseus</i> by biolistic inoculation of tobacco rattle virus vectors. Plant Biology, 2015, 17, 1242-1246.	3.8	16
79	The high osmolarity glycerol (HOG) pathway in fungi^{â€}. Critical Reviews in Microbiology, 2022, 48, 657-695.	6.1	16
80	A TRP5/5-fluoroanthranilic acid counter-selection system for gene disruption in Candida guilliermondii. Current Genetics, 2012, 58, 245-254.	1.7	15
81	Virus-induced gene silencing in Rauwolfia species. Protoplasma, 2017, 254, 1813-1818.	2.1	15
82	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
83	Subcellular localization of the histidine kinase receptors Sln1p, Nik1p and Chk1p in the yeast CTG clade species Candida guilliermondii. Fungal Genetics and Biology, 2014, 65, 25-36.	2.1	14
84	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
85	Cytokinin and Ethylene Cell Signaling Pathways from Prokaryotes to Eukaryotes. Cells, 2020, 9, 2526.	4.1	14
86	Developmental Methylome of the Medicinal Plant Catharanthus roseus Unravels the Tissue-Specific Control of the Monoterpene Indole Alkaloid Pathway by DNA Methylation. International Journal of Molecular Sciences, 2020, 21, 6028.	4.1	14
87	Triple subcellular targeting of isopentenyl diphosphate isomerases encoded by a single gene. Plant Signaling and Behavior, 2012, 7, 1495-1497.	2.4	13
88	Transformation ofCandida guilliermondiiwild-type strains using theStaphylococcus aureusMRSA 252blegene as a phleomycin-resistant marker. FEMS Yeast Research, 2013, 13, 354-358.	2.3	13
89	Prequels to Synthetic Biology. Methods in Enzymology, 2016, 576, 167-206.	1.0	13
90	Optimization of the URA-blaster disruption system in Candida guilliermondii: Efficient gene targeting using the URA3 marker. Journal of Microbiological Methods, 2012, 91, 117-120.	1.6	12

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91	New Insight into HPts as Hubs in Poplar Cytokinin and Osmosensing Multistep Phosphorelays: Cytokinin Pathway Uses Specific HPts. Plants, 2019, 8, 591.	3.5	12
92	Identifying Genes Involved in Alkaloid Biosynthesis in Vinca minor through Transcriptomics and Gene Co-Expression Analysis. Biomolecules, 2020, 10, 1595.	4.0	12
93	Insights into B-type RR members as signaling partners acting downstream of HPt partners of HK1 in the osmotic stress response in Populus. Plant Physiology and Biochemistry, 2015, 94, 244-252.	5.8	11
94	Identification of five B-type response regulators as members of a multistep phosphorelay system interacting with histidine-containing phosphotransfer partners of Populus osmosensor. BMC Plant Biology, 2012, 12, 241.	3.6	10
95	A new series of vectors for constitutive, inducible or repressible gene expression in Candida guilliermondii. Journal of Biotechnology, 2014, 180, 37-42.	3.8	10
96	Genome-wide identification and biochemical characterization of the UGT88F subfamily in Malus x domestica Borkh. Phytochemistry, 2019, 157, 135-144.	2.9	10
97	Optimization of Tabersonine Methoxylation to Increase Vindoline Precursor Synthesis in Yeast Cell Factories. Molecules, 2021, 26, 3596.	3.8	10
98	Optimized genetic transformation of <i>Zanthoxylum zanthoxyloides</i> by <i>Agrobacterium rhizogenes</i> and the production of chelerythrine and skimmiamine in hairy root cultures. Engineering in Life Sciences, 2014, 14, 95-99.	3.6	9
99	Tracking the Origin and Evolution of Plant Metabolites. Trends in Plant Science, 2020, 25, 1182-1184.	8.8	9
100	Group X hybrid histidine kinase Chk1 is dispensable for stress adaptation, hostâ€“pathogen interactions and virulence in the opportunistic yeast Candida guilliermondii. Research in Microbiology, 2017, 168, 644-654.	2.1	8
101	A synthetic construct for genetic engineering of the emerging pathogenic yeast Candida auris. Plasmid, 2018, 95, 7-10.	1.4	8
102	Highlighting type A RRs as potential regulators of the dkHK1 multi-step phosphorelay pathway in Populus. Plant Science, 2018, 277, 68-78.	3.6	8
103	Molecular cloning and characterisation of two calmodulin isoforms of the Madagascar periwinkle <i>Catharanthus roseus</i>. Plant Biology, 2011, 13, 36-41.	3.8	7
104	A type-B response regulator drives the expression of the hydroxymethylbutenyl diphosphate synthase gene in periwinkle. Journal of Plant Physiology, 2012, 169, 1571-1574.	3.5	7
105	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
106	In plantavalidation of HK1 homodimerization and recruitment of preferential HPt downstream partners involved in poplar multistep phosphorelay systems. Plant Biosystems, 2013, 147, 991-995.	1.6	7
107	Disrupting the methionine biosynthetic pathway in <i>Candida guilliermondii</i>: characterization of the <i>MET2</i> gene as counterâ€selectable marker. Yeast, 2014, 31, 243-251.	1.7	7
108	Setting-up a fast and reliable cytokinin biosensor based on a plant histidine kinase receptor expressed in Saccharomyces cerevisiae. Journal of Biotechnology, 2019, 289, 103-111.	3.8	7

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109	Molecular Characterization of an Aux/IAA of Catharanthus roseus. Journal of Plant Growth Regulation, 2011, 30, 235-241.	5.1	6
110	Virus-Induced Gene Silencing: Hush Genes to Make Them Talk. Trends in Plant Science, 2020, 25, 714-715.	8.8	6
111	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
112	Postharvest Treatment of Wood Biomass from a Large Collection of European Grape Varieties: Impact on the Selection of Polyphenol-Rich Byproducts. ACS Sustainable Chemistry and Engineering, 2021, 9, 3509-3517.	6.7	6
113	Stilbenoid-Enriched Grape Cane Extracts for the Biocontrol of Grapevine Diseases. Progress in Biological Control, 2020, , 215-239.	0.5	6
114	An additionalMeyerozyma guilliermondii IMH3gene confers mycophenolic acid resistance in fungal CTG clade species. FEMS Yeast Research, 2016, 16, fow078.	2.3	5
115	Megaviruses: An involvement in phytohormone receptor gene transfer in brown algae?. Gene, 2019, 704, 149-151.	2.2	5
116	Microbial Cell Factories for Tetrahydroisoquinoline Alkaloid Production. ChemBioChem, 2021, 22, 639-641.	2.6	5
117	Vacuole-Targeted Proteins: Ins and Outs of Subcellular Localization Studies. Methods in Molecular Biology, 2018, 1789, 33-54.	0.9	4
118	ARResting cytokinin signaling for salt-stress tolerance. Plant Science, 2022, 314, 111116.	3.6	4
119	Evaluation of type-B RR dimerization in poplar: A mechanism to preserve signaling specificity?. Plant Science, 2021, 313, 111068.	3.6	3
120	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
121	Engineered Microbes for Producing Anticholinergics. ChemBioChem, 2021, 22, 1368-1370.	2.6	2
122	Computational biotechnology guides elucidation of the biosynthesis of the plant anticancer drug camptothecin. Computational and Structural Biotechnology Journal, 2021, 19, 3659-3663.	4.1	2
123	Plant to Insect Horizontal Gene Transfer: Empowering Whiteflies. Trends in Genetics, 2021, 37, 688-690.	6.7	2
124	ALSV-Based Virus-Induced Gene Silencing in Apple Tree (MalusÂÃ—Âdomestica L.). Methods in Molecular Biology, 2020, 2172, 183-197.	0.9	2
125	Chromosome-scale genomes throw light on plant drug biosynthesis. Trends in Pharmacological Sciences, 2022, , .	8.7	2
126	Puzzling Out the Colchicine Biosynthetic Pathway. ChemMedChem, 2021, 16, 621-623.	3.2	1

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127	A Biolistic-Mediated Virus-Induced Gene Silencing in Apocynaceae to Map Biosynthetic Pathways of Alkaloids. Methods in Molecular Biology, 2020, 2172, 93-110.	0.9	1
128	Predicting Monoterpene Indole Alkaloid-Related Genes from Expression Data with Artificial Neural Networks. Methods in Molecular Biology, 2022, , 131-140.	0.9	1
129	Towards a Better Understanding of Toxin Biosynthesis in Seaweeds. ChemBioChem, 2022, 23, .	2.6	1
130	Turning up the Green Light. Trends in Cell Biology, 2021, 31, 143-145.	7.9	0
131	Efficient Terpene Production by Marine Thraustochytrids: Shedding Light on the Thermodynamic Driving Force. MBio, 2021, 12, e0197621.	4.1	0
132	Prenylated Proteins Are Required for Methyl-Jasmonate-Induced Monoterpenoid Indole Alkaloids Biosynthesis in Catharanthus roseus. , 2012, , 285-296.		0
133	Tonoplast and Peroxisome Targeting of Î³-tocopherol N-methyltransferase Homologs Involved in the Synthesis of Monoterpene Indole Alkaloids. Plant and Cell Physiology, 2021, , .	3.1	0
134	Social amoebae as a new chassis for drug production. Trends in Biotechnology, 2022, , .	9.3	0