Fred Beisson

List of Publications by Year
in descending order

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54 papers	9,010 citations	87888 38 h-index	161849 54 g-index
57 all docs	57 docs citations	57 times ranked	9157 citing authors

#	Article	IF	Citations
1	Acyl-Lipid Metabolism. The Arabidopsis Book, 2013, 11, e0161.	0.5	974
2	Building lipid barriers: biosynthesis of cutin and suberin. Trends in Plant Science, 2008, 13, 236-246.	8.8	779
3	Oil accumulation in the model green alga Chlamydomonas reinhardtii: characterization, variability between common laboratory strains and relationship with starch reserves. BMC Biotechnology, 2011, 11, 7.	3.3	625
4	The Acyltransferase GPAT5 Is Required for the Synthesis of Suberin in Seed Coat and Root of Arabidopsis. Plant Cell, 2007, 19, 351-368.	6.6	366
5	Arabidopsis Genes Involved in Acyl Lipid Metabolism. A 2003 Census of the Candidates, a Study of the Distribution of Expressed Sequence Tags in Organs, and a Web-Based Database. Plant Physiology, 2003, 132, 681-697.	4.8	350
6	Characterization of Arabidopsis ABCG11/WBC11, an ATP binding cassette (ABC) transporter that is required for cuticular lipid secretion^{â€}. Plant Journal, 2007, 52, 485-498.	5.7	349
7	Identification of acyltransferases required for cutin biosynthesis and production of cutin with suberin-like monomers. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18339-18344.	7.1	348
8	Oil content of Arabidopsis seeds: The influence of seed anatomy, light and plant-to-plant variation. Phytochemistry, 2006, 67, 904-915.	2.9	324
9	An algal photoenzyme converts fatty acids to hydrocarbons. Science, 2017, 357, 903-907.	12.6	317
10	Cuticular Lipid Composition, Surface Structure, and Gene Expression in Arabidopsis Stem Epidermis. Plant Physiology, 2005, 139, 1649-1665.	4.8	309
11	Cytochromes P450. The Arabidopsis Book, 2011, 9, e0144.	0.5	294
12	Methods for lipase detection and assay: a critical review. European Journal of Lipid Science and Technology, 2000, 102, 133-153.	1.5	287
13	Acyl-Lipid Metabolism. The Arabidopsis Book, 2010, 8, e0133.	0.5	287
14	Solving the puzzles of cutin and suberin polymer biosynthesis. Current Opinion in Plant Biology, 2012, 15, 329-337.	7.1	256
15	Metabolism of acylâ€lipids in Chlamydomonas reinhardtii. Plant Journal, 2015, 82, 504-522.	5.7	230
16	Nanoridges that characterize the surface morphology of flowers require the synthesis of cutin polyester. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22008-22013.	7.1	228
17	Proteomic profiling of oil bodies isolated from the unicellular green microalga Chlamydomonas reinhardtii: With focus on proteins involved in lipid metabolism. Proteomics, 2011, 11, 4266-4273.	2.2	201
18	Identification of an Arabidopsis Feruloyl-Coenzyme A Transferase Required for Suberin Synthesis Â Â. Plant Physiology, 2009, 151, 1317-1328.	4.8	193

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19	A Land-Plant-Specific Glycerol-3-Phosphate Acyltransferase Family in Arabidopsis: Substrate Specificity, sn-2 Preference, and Evolution Â Â. Plant Physiology, 2012, 160, 638-652.	4.8	188
20	Analysis of the aliphatic monomer composition of polyesters associated with Arabidopsis epidermis: occurrence of octadeca-cis-6, cis-9-diene-1,18-dioate as the major component. Plant Journal, 2004, 40, 920-930.	5.7	175
21	A distinct type of glycerol-3-phosphate acyltransferase with sn -2 preference and phosphatase activity producing 2-monoacylglycerol. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12040-12045.	7.1	169
22	Mutations in UDP-Glucose:Sterol Glucosyltransferase in Arabidopsis Cause Transparent Testa Phenotype and Suberization Defect in Seeds Â Â Â. Plant Physiology, 2009, 151, 78-87.	4.8	135
23	Cytochrome P450 metabolizing fatty acids in plants: characterization and physiological roles. FEBS Journal, 2011, 278, 195-205.	4.7	128
24	Lipidomic and transcriptomic analyses of Chlamydomonas reinhardtii under heat stress unveil a direct route for the conversion of membrane lipids into storage lipids. Plant, Cell and Environment, 2016, 39, 834-847.	5.7	124
25	Microalgal lipid droplets: composition, diversity, biogenesis and functions. Plant Cell Reports, 2015, 34, 545-555.	5.6	118
26	Microalgae Synthesize Hydrocarbons from Long-Chain Fatty Acids via a Light-Dependent Pathway. Plant Physiology, 2016, 171, 2393-2405.	4.8	102
27	Monoacylglycerols Are Components of Root Waxes and Can Be Produced in the Aerial Cuticle by Ectopic Expression of a Suberin-Associated Acyltransferase. Plant Physiology, 2007, 144, 1267-1277.	4.8	99
28	Mechanism and dynamics of fatty acid photodecarboxylase. Science, 2021, 372, .	12.6	93
29	CELLULOSE SYNTHASE9 Serves a Nonredundant Role in Secondary Cell Wall Synthesis in Arabidopsis Epidermal Testa Cells Â Â Â. Plant Physiology, 2010, 153, 580-589.	4.8	86
30	Histone H2B Monoubiquitination is Involved in the Regulation of Cutin and Wax Composition in Arabidopsis thaliana. Plant and Cell Physiology, 2014, 55, 455-466.	3.1	86
31	The Green Microalga Chlamydomonas reinhardtii Has a Single Â-3 Fatty Acid Desaturase That Localizes to the Chloroplast and Impacts Both Plastidic and Extraplastidic Membrane Lipids. Plant Physiology, 2013, 163, 914-928.	4.8	83
32	Chlamydomonas carries out fatty acid Î²â€oxidation in ancestral peroxisomes using a bona fide acylâ€CoA oxidase. Plant Journal, 2017, 90, 358-371.	5.7	80
33	Interfacial catalysis by lipases. Journal of Molecular Catalysis B: Enzymatic, 2001, 11, 165-171.	1.8	62
34	Saturating Light Induces Sustained Accumulation of Oil in Plastidal Lipid Droplets in Chlamydomonas reinhardtii. Plant Physiology, 2016, 171, 2406-2417.	4.8	54
35	Interorganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in Chlamydomonas. Plant Cell, 2018, 30, 1824-1847.	6.6	51
36	Development of a forward genetic screen to isolate oil mutants in the green microalga Chlamydomonas reinhardtii. Biotechnology for Biofuels, 2013, 6, 178.	6.2	49

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37	Use of the Tape Stripping Technique for Directly Quantifying Esterase Activities in Human Stratum Corneum. Analytical Biochemistry, 2001, 290, 179-185.	2.4	45
38	BODYGUARD is required for the biosynthesis of cutin in Arabidopsis. New Phytologist, 2016, 211, 614-626.	7.3	43
39	The biosynthesis of cutin and suberin as an alternative source of enzymes for the production of bio-based chemicals and materials. Biochimie, 2009, 91, 685-691.	2.6	40
40	Large scale purification of an almond oleosin using an organic solvent procedure. Plant Physiology and Biochemistry, 2001, 39, 623-630.	5.8	37
41	Continuous photoproduction of hydrocarbon drop-in fuel by microbial cell factories. Scientific Reports, 2019, 9, 13713.	3.3	33
42	Branched-Chain Amino Acid Catabolism Impacts Triacylglycerol Homeostasis in Chlamydomonas reinhardtii. Plant Physiology, 2019, 179, 1502-1514.	4.8	26
43	Use of naturally fluorescent triacylglycerols from Parinari glaberrimum to detect low lipase activities from Arabidopsis thaliana seedlings. Journal of Lipid Research, 1999, 40, 2313-21.	4.2	26
44	Fatty acid photodecarboxylase is an ancient photoenzyme that forms hydrocarbons in the thylakoids of algae. Plant Physiology, 2021, 186, 1455-1472.	4.8	23
45	The Phosphate Fast-Responsive Genes PECP1 and PPsPase1 Affect Phosphocholine and Phosphoethanolamine Content. Plant Physiology, 2018, 176, 2943-2962.	4.8	22
46	<scp>CYP</scp>77<scp>A</scp>19 and <scp>CYP</scp>77<scp>A</scp>20 characterized from <scp>S</scp>olanum tuberosum oxidize fatty acids in vitro and partially restore the wild phenotype in an <scp>A</scp>rabidopsis thaliana cutin mutant. Plant, Cell and Environment, 2014, 37, 2102-2115.	5.7	17
47	Arabidopsis thaliana EPOXIDE HYDROLASE1 (AtEH1) is a cytosolic epoxide hydrolase involved in the synthesis of polyâ€hydroxylated cutin monomers. New Phytologist, 2017, 215, 173-186.	7.3	17
48	Chlamydomonas cell cycle mutant crcdc5 over-accumulates starch and oil. Biochimie, 2020, 169, 54-61.	2.6	13
49	Whole Genome Re-Sequencing Identifies a Quantitative Trait Locus Repressing Carbon Reserve Accumulation during Optimal Growth in Chlamydomonas reinhardtii. Scientific Reports, 2016, 6, 25209.	3.3	12
50	Fatty Acid Photodecarboxylase Is an Interfacial Enzyme That Binds to Lipidâ€“Water Interfaces to Access Its Insoluble Substrate. Biochemistry, 2021, 60, 3200-3212.	2.5	12
51	Phospholipase pPLAIIIÎ± Increases Germination Rate and Resistance to Turnip Crinkle Virus when Overexpressed. Plant Physiology, 2020, 184, 1482-1498.	4.8	11
52	Knitting a polyester skin. Nature Chemical Biology, 2012, 8, 603-604.	8.0	9
53	Assaying Arabidopsis lipase activity. Biochemical Society Transactions, 2000, 28, 773.	3.4	6
54	CYP77B1 a fatty acid epoxygenase specific to flowering plants. Plant Science, 2021, 307, 110905.	3.6	5