Eric MarÃ©chal

List of Publications by Year
in descending order

131 papers	6,014 citations	71102 41 h-index	85541 71 g-index
141 all docs	141 docs citations	141 times ranked	6126 citing authors

#	Article	IF	Citations
1	Origin of cyanobacterial thylakoids via a non-vesicular glycolipid phase transition and their impact on the Great Oxygenation Event. Journal of Experimental Botany, 2022, 73, 2721-2734.	4.8	7
2	Editorial: Ice and Snow Algae. Frontiers in Plant Science, 2022, 13, 868467.	3.6	0
3	PDAT regulates PE as transient carbon sink alternative to triacylglycerol in Nannochloropsis. Plant Physiology, 2022, 189, 1345-1362.	4.8	14
4	The redox state of the plastoquinone (PQ) pool is connected to thylakoid lipid saturation in a marine diatom. Photosynthesis Research, 2022, 153, 71-82.	2.9	5
5	Structure and enzymatic degradation of the polysaccharide secreted by Nostoc commune. Carbohydrate Research, 2022, 515, 108544.	2.3	6
6	Multiplexed CRISPR/Cas9 editing of the longâ€chain acylâ€CoA synthetase family in the diatom Phaeodactylum tricornutum reveals that mitochondrial ptACSL3 is involved in the synthesis of storage lipids. New Phytologist, 2022, 233, 1797-1812.	7.3	13
7	Characterization of the Bubblegum acyl-CoA synthetase of Microchloropsis gaditana. Plant Physiology, 2021, 185, 815-835.	4.8	9
8	Lipid Droplets in Unicellular Photosynthetic Stramenopiles. Frontiers in Plant Science, 2021, 12, 639276.	3.6	12
9	Plastidial acyl carrier protein Î”9â€desaturase modulates eicosapentaenoic acid biosynthesis and triacylglycerol accumulation in Phaeodactylum tricornutum. Plant Journal, 2021, 106, 1247-1259.	5.7	18
10	Consequences of Mixotrophy on Cell Energetic Metabolism in Microchloropsis gaditana Revealed by Genetic Engineering and Metabolic Approaches. Frontiers in Plant Science, 2021, 12, 628684.	3.6	8
11	LARP6C orchestrates posttranscriptional reprogramming of gene expression during hydration to promote pollen tube guidance. Plant Cell, 2021, 33, 2637-2661.	6.6	15
12	Altitudinal Zonation of Green Algae Biodiversity in the French Alps. Frontiers in Plant Science, 2021, 12, 679428.	3.6	22
13	Live single-cell transcriptional dynamics via RNA labelling during the phosphate response in plants. Nature Plants, 2021, 7, 1050-1064.	9.3	27
14	Grand Challenges in Microalgae Domestication. Frontiers in Plant Science, 2021, 12, 764573.	3.6	5
15	An Oil Hyper-Accumulator Mutant Highlights Peroxisomal ATP Import as a Regulatory Step for Fatty Acid Metabolism in Aurantiochytrium limacinum. Cells, 2021, 10, 2680.	4.1	4
16	Editorial: Lipids in Cyanobacteria, Algae, and Plantsâ€”From Biology to Biotechnology. Frontiers in Plant Science, 2021, 12, 834384.	3.6	1
17	Relationship between acyl-lipid and sterol metabolisms in diatoms. Biochimie, 2020, 169, 3-11.	2.6	24
18	Phylogeny and Sequence Space: A Combined Approach to Analyze the Evolutionary Trajectories of Homologous Proteins. The Case Study of Aminodeoxychorismate Synthase. Acta Biotheoretica, 2020, 68, 139-156.	1.5	2

#	Article	IF	Citations
19	Unveiling membrane thermoregulation strategies in marine picocyanobacteria. New Phytologist, 2020, 225, 2396-2410.	7.3	20
20	The Mybâ€like transcription factor phosphorus starvation response (PtPSR) controls conditional P acquisition and remodelling in marine microalgae. New Phytologist, 2020, 225, 2380-2395.	7.3	38
21	The Puzzling Conservation and Diversification of Lipid Droplets from Bacteria to Eukaryotes. Results and Problems in Cell Differentiation, 2020, 69, 281-334.	0.7	2
22	The zoospores of the thraustochytridAurantiochytrium limacinum: Transcriptional reprogramming and lipid metabolism associated to their specific functions. Environmental Microbiology, 2020, 22, 1901-1916.	3.8	9
23	Stepwise Biogenesis of Subpopulations of Lipid Droplets in Nitrogen Starved Phaeodactylum tricornutum Cells. Frontiers in Plant Science, 2020, 11, 48.	3.6	16
24	Mechanism of activation of plant monogalactosyldiacylglycerol synthase 1 (MGD1) by phosphatidylglycerol. Glycobiology, 2020, 30, 396-406.	2.5	10
25	From a Free-Living Cyanobacteria to an Obligate Endosymbiotic Organelle: Early Steps in Lipid Metabolism Integration in Paulinellidae. Plant and Cell Physiology, 2020, 61, 865-868.	3.1	0
26	Illumina and PacBio DNA sequencing data, de novo assembly and annotation of the genome of Aurantiochytrium limacinum strain CCAP_4062/1. Data in Brief, 2020, 31, 105729.	1.0	14
27	The lipid metabolism in thraustochytrids. Progress in Lipid Research, 2019, 76, 101007.	11.6	119
28	Biosynthesis of Long Chain Alkyl Diols and Long Chain Alkenols in Nannochloropsis spp. (Eustigmatophyceae). Plant and Cell Physiology, 2019, 60, 1666-1682.	3.1	9
29	Algal Remodeling in a Ubiquitous Planktonic Photosymbiosis. Current Biology, 2019, 29, 968-978.e4.	3.9	45
30	Interplay between Jasmonic Acid, Phosphate Signaling and the Regulation of Glycerolipid Homeostasis in Arabidopsis. Plant and Cell Physiology, 2019, 60, 1260-1273.	3.1	18
31	Marine and Freshwater Plants: Challenges and Expectations. Frontiers in Plant Science, 2019, 10, 1545.	3.6	5
32	The architecture of lipid droplets in the diatom Phaeodactylum tricornutum. Algal Research, 2019, 38, 101415.	4.6	52
33	Screening for Biologically Annotated Drugs That Trigger Triacylglycerol Accumulation in the Diatom Phaeodactylum. Plant Physiology, 2018, 177, 532-552.	4.8	43
34	Sequencing, De Novo Assembly, and Annotation of the Complete Genome of a New Thraustochytrid Species, Strain CCAP_4062/3. Genome Announcements, 2018, 6, .	0.8	17
35	Thermoacclimation and genome adaptation of the membrane lipidome in marine Synechococcus. Environmental Microbiology, 2018, 20, 612-631.	3.8	39
36	Enhanced triacylglycerol production in the diatom Phaeodactylum tricornutum by inactivation of a Hotdog-fold thioesterase gene using TALEN-based targeted mutagenesis. Biotechnology for Biofuels, 2018, 11, 312.	6.2	39

#	Article	IF	Citations
37	Nuclear genome sequence of the plastid-lacking cryptomonad Goniomonas avonlea provides insights into the evolution of secondary plastids. BMC Biology, 2018, 16, 137.	3.8	42
38	Non-Enzymatic Synthesis of Bioactive Isoprostanoids in the Diatom Phaeodactylum following Oxidative Stress. Plant Physiology, 2018, 178, 1344-1357.	4.8	34
39	Specific Targeting of Plant and Apicomplexa Parasite Tubulin through Differential Screening Using In Silico and Assay-Based Approaches. International Journal of Molecular Sciences, 2018, 19, 3085.	4.1	10
40	Proposal of a new thraustochytrid genus Hondaea gen. nov. and comparison of its lipid dynamics with the closely related pseudo-cryptic genus Aurantiochytrium. Algal Research, 2018, 35, 125-141.	4.6	55
41	Do Galactolipid Synthases Play a Key Role in the Biogenesis of Chloroplast Membranes of Higher Plants?. Frontiers in Plant Science, 2018, 9, 126.	3.6	40
42	Primary Endosymbiosis: Emergence of the Primary Chloroplast and the Chromatophore, Two Independent Events. Methods in Molecular Biology, 2018, 1829, 3-16.	0.9	16
43	Ecophysiology and lipid dynamics of a eukaryotic mangrove decomposer. Environmental Microbiology, 2018, 20, 3057-3068.	3.8	21
44	Plastid thylakoid architecture optimizes photosynthesis in diatoms. Nature Communications, 2017, 8, 15885.	12.8	93
45	Tight cohesion between glycolipid membranes results from balanced waterâ€“headgroup interactions. Nature Communications, 2017, 8, 14899.	12.8	61
46	Mechanisms of Phosphorus Acquisition and Lipid Class Remodeling under P Limitation in a Marine Microalga. Plant Physiology, 2017, 175, 1543-1559.	4.8	74
47	Nitric Oxide Mediates Nitrite-Sensing and Acclimation and Triggers a Remodeling of Lipids. Plant Physiology, 2017, 175, 1407-1423.	4.8	38
48	Investigating mixotrophic metabolism in the model diatom Phaeodactylum tricornutum. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160404.	4.0	85
49	A Palmitic Acid Elongase Affects Eicosapentaenoic Acid and Plastidial Monogalactosyldiacylglycerol Levels in Nannochloropsis. Plant Physiology, 2017, 173, 742-759.	4.8	65
50	LC-MS/MS versus TLC plus GC methods: Consistency of glycerolipid and fatty acid profiles in microalgae and higher plant cells and effect of a nitrogen starvation. PLoS ONE, 2017, 12, e0182423.	2.5	74
51	Chemical Genetics in Dissecting Membrane Glycerolipid Functions. Sub-Cellular Biochemistry, 2016, 86, 159-175.	2.4	1
52	Ultrastructure of the Periplastidial Compartment of the Diatom Phaeodactylum tricornutum. Protist, 2016, 167, 254-267.	1.5	54
53	Light Remodels Lipid Biosynthesis in Nannochloropsis gaditana by Modulating Carbon Partitioning between Organelles. Plant Physiology, 2016, 171, 2468-2482.	4.8	106
54	Structural insights and membrane binding properties of <scp>MGD</scp>1, the major galactolipid synthase in plants. Plant Journal, 2016, 85, 622-633.	5.7	22

#	Article	IF	Citations
55	Turnover rates in microorganisms by laser ablation electrospray ionization mass spectrometry and pulse-chase analysis. Analytica Chimica Acta, 2016, 902, 1-7.	5.4	13
56	AtMic60 Is Involved in Plant Mitochondria Lipid Trafficking and Is Part of a Large Complex. Current Biology, 2016, 26, 627-639.	3.9	81
57	New Insights on Thylakoid Biogenesis in Plant Cells. International Review of Cell and Molecular Biology, 2016, 323, 1-30.	3.2	27
58	ALA10, a Phospholipid Flippase, Controls FAD2/FAD3 Desaturation of Phosphatidylcholine in the ER and Affects Chloroplast Lipid Composition in Arabidopsis thaliana. Plant Physiology, 2016, 170, 1300-1314.	4.8	60
59	C1 Metabolism Inhibition and Nitrogen Deprivation Trigger Triacylglycerol Accumulation in Arabidopsis thaliana Cell Cultures and Highlight a Role of NPC in Phosphatidylcholine-to-Triacylglycerol Pathway. Frontiers in Plant Science, 2016, 07, 2014.	3.6	15
60	Apicoplast-Localized Lysophosphatidic Acid Precursor Assembly Is Required for Bulk Phospholipid Synthesis in Toxoplasma gondii and Relies on an Algal/Plant-Like Glycerol 3-Phosphate Acyltransferase. PLoS Pathogens, 2016, 12, e1005765.	4.7	47
61	Levels of polyunsaturated fatty acids correlate with growth rate in plant cell cultures. Scientific Reports, 2015, 5, 15207.	3.3	43
62	Inventory of Fatty Acid Desaturases in the Pennate Diatom Phaeodactylum tricornutum. Marine Drugs, 2015, 13, 1317-1339.	4.6	64
63	Oil Accumulation by the Oleaginous Diatom Fistulifera solaris as Revealed by the Genome and Transcriptome. Plant Cell, 2015, 27, 162-176.	6.6	149
64	Membrane Glycerolipid Remodeling Triggered by Nitrogen and Phosphorus Starvation inPhaeodactylum tricornutum. Plant Physiology, 2015, 167, 118-136.	4.8	286
65	The selective biotin tagging and thermolysin proteolysis of chloroplast outer envelope proteins reveals information on protein topology and association into complexes. Frontiers in Plant Science, 2014, 5, 203.	3.6	3
66	Identification of Phosphatin, a Drug Alleviating Phosphate Starvation Responses in Arabidopsis Â Â Â. Plant Physiology, 2014, 166, 1479-1491.	4.8	20
67	Production and Analysis of Perdeuterated Lipids from Pichia pastoris Cells. PLoS ONE, 2014, 9, e92999.	2.5	39
68	Glycerolipids in photosynthesis: Composition, synthesis and trafficking. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 470-480.	1.0	296
69	Evolution of galactoglycerolipid biosynthetic pathways â€“ From cyanobacteria to primary plastids and from primary to secondary plastids. Progress in Lipid Research, 2014, 54, 68-85.	11.6	118
70	Plastids with or without galactoglycerolipids. Trends in Plant Science, 2014, 19, 71-78.	8.8	23
71	The influence of lipids on MGD1 membrane binding highlights novel mechanisms for galactolipid biosynthesis regulation in chloroplasts. FASEB Journal, 2014, 28, 3114-3123.	0.5	26
72	Metabolic transformation of microalgae due to light acclimation and genetic modifications followed by laser ablation electrospray ionization mass spectrometry with ion mobility separation. Analyst, The, 2014, 139, 5945-5953.	3.5	13

#	Article	IF	Citations
73	Contribution of galactoglycerolipids to the 3â€dimensional architecture of thylakoids. FASEB Journal, 2014, 28, 3373-3383.	0.5	139
74	Modeling of regulatory loops controlling galactolipid biosynthesis in the inner envelope membrane of chloroplasts. Journal of Theoretical Biology, 2014, 361, 1-13.	1.7	21
75	Specific Role of Glycolipids in the Regular Stacking of Membranes Reconstituted from Thylakoid Lipid Extracts. Biophysical Journal, 2014, 106, 512a.	0.5	1
76	Discovery of Compounds Blocking the Proliferation of Toxoplasma gondii and Plasmodium falciparum in a Chemical Space Based on Piperidinyl-Benzimidazolone Analogs. Antimicrobial Agents and Chemotherapy, 2014, 58, 2586-2597.	3.2	9
77	Screening for Inhibitors of Chloroplast Galactolipid Synthesis Acting in Membrano and in Planta. Methods in Molecular Biology, 2014, 1056, 79-93.	0.9	0
78	Atypical lipid composition in the purified relict plastid (apicoplast) of malaria parasites. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7506-7511.	7.1	117
79	Revisiting the expression and purification of MGD1, the major galactolipid synthase in Arabidopsis to establish a novel standard for biochemical and structural studies. Biochimie, 2013, 95, 700-708.	2.6	12
80	The Response of Nannochloropsis gaditana to Nitrogen Starvation Includes De Novo Biosynthesis of Triacylglycerols, a Decrease of Chloroplast Galactolipids, and Reorganization of the Photosynthetic Apparatus. Eukaryotic Cell, 2013, 12, 665-676.	3.4	301
81	Glycerolipid Biosynthesis and Chloroplast Biogenesis. Advances in Photosynthesis and Respiration, 2013, , 131-154.	1.0	1
82	Druggable Biochemical Targets: Facts and Fancies. , 2013, , 1-11.		0
83	Inhibition of p-Aminobenzoate and Folate Syntheses in Plants and Apicomplexan Parasites by Natural Product Rubreserine. Journal of Biological Chemistry, 2012, 287, 22367-22376.	3.4	18
84	Galvestine-1, a novel chemical probe for the study of the glycerolipid homeostasis system in plant cells. Molecular BioSystems, 2012, 8, 2023.	2.9	34
85	Plasmodium falciparum Apicoplast Drugs: Targets or Off-Targets?. Chemical Reviews, 2012, 112, 1269-1283.	47.7	81
86	Role of phosphatidic acid in plant galactolipid synthesis. Biochimie, 2012, 94, 86-93.	2.6	68
87	Fitting hidden Markov models of protein domains to a target species: application to Plasmodium falciparum. BMC Bioinformatics, 2012, 13, 67.	2.6	14
88	The Biosynthetic Capacities of the Plastids and Integration Between Cytoplasmic and Chloroplast Processes. Annual Review of Genetics, 2012, 46, 233-264.	7.6	115
89	The apicoplast: a key target to cure malaria. Current Pharmaceutical Design, 2012, 18, 3490-504.	1.9	20
90	Chemical inhibitors of monogalactosyldiacylglycerol synthases in Arabidopsis thaliana. Nature Chemical Biology, 2011, 7, 834-842.	8.0	74

#	Article	IF	Citations
91	Membrane lipidomics for the discovery of new antiparasitic drug targets. Trends in Parasitology, 2011, 27, 496-504.	3.3	18
92	EuPathDomains: The divergent domain database for eukaryotic pathogens. Infection, Genetics and Evolution, 2011, 11, 698-707.	2.3	8
93	Identification of Plant-like Galactolipids in Chromera velia, a Photosynthetic Relative of Malaria Parasites. Journal of Biological Chemistry, 2011, 286, 29893-29903.	3.4	48
94	The pharmacological screening process: the small molecule, the biological Screen, the robot, the signal and the information. , 2011, , 7-21.		1
95	The Cyst-Dividing Bacterium Ramlibacter tataouinensis TTB310 Genome Reveals a Well-Stocked Toolbox for Adaptation to a Desert Environment. PLoS ONE, 2011, 6, e23784.	2.5	47
96	In silico Discovery of Chemotherapeutic Agents. , 2010, , 279-304.		0
97	Assessing functional annotation transfers with inter-species conserved coexpression: application to Plasmodium falciparum. BMC Genomics, 2010, 11, 35.	2.8	13
98	Plant lipidâ€associated fibrillin proteins condition jasmonate production under photosynthetic stress. Plant Journal, 2010, 61, 436-445.	5.7	105
99	Rodent and nonrodent malaria parasites differ in their phospholipid metabolic pathways. Journal of Lipid Research, 2010, 51, 81-96.	4.2	51
100	Activation of the Chloroplast Monogalactosyldiacylglycerol Synthase MGD1 by Phosphatidic Acid and Phosphatidylglycerol. Journal of Biological Chemistry, 2010, 285, 6003-6011.	3.4	102
101	Detection of new protein domains using co-occurrence: application to Plasmodium falciparum. Bioinformatics, 2009, 25, 3077-3083.	4.1	37
102	Potential and limits of in silico target discoveryâ€"Case study of the search for new antimalarial chemotherapeutic targets. Infection, Genetics and Evolution, 2009, 9, 359-367.	2.3	12
103	Lipid Trafficking in Plant Photosynthetic Cells. Advances in Photosynthesis and Respiration, 2009, , 349-372.	1.0	7
104	Enhanced Antimalarial Activity of Novel Synthetic Aculeatin Derivatives. Journal of Medicinal Chemistry, 2008, 51, 4870-4873.	6.4	31
105	Subcellular localization and dynamics of a digalactolipid-like epitope in Toxoplasma gondii. Journal of Lipid Research, 2008, 49, 746-762.	4.2	27
106	Chemogenomics: A Discipline at the Crossroad of High Throughput Technologies, Biomarker Research, Combinatorial Chemistry, Genomics, Cheminformatics, Bioinformatics and Artificial Intelligence.. Combinatorial Chemistry and High Throughput Screening, 2008, 11, 583-586.	1.1	21
107	Editorial [Hot Topic: Chemogenomics: A Discipline at the Crossroad of High Throughput Technologies, Biomarker Research, Combinatorial Chemistry, Genomics, Cheminformatics, Bioinformatics and Artificial Intelligence Chemogenomics (Guest Editor: Eric Marechal)]. Combinatorial Chemistry and High Throughput Screening, 2008, 11, 582-582.	1.1	4
108	Glycerolipid transfer for the building of membranes in plant cells. Progress in Lipid Research, 2007, 46, 37-55.	11.6	134

#	Article	IF	Citations
109	Lipidomic Analysis of Toxoplasma gondii Reveals Unusual Polar Lipids. Biochemistry, 2007, 46, 13882-13890.	2.5	70
110	The configuration space of homologous proteins: A theoretical and practical framework to reduce the diversity of the protein sequence space after massive all-by-all sequence comparisons. Future Generation Computer Systems, 2007, 23, 410-427.	7.5	6
111	Integration and mining of malaria molecular, functional and pharmacological data: how far are we from a chemogenomic knowledge space?. Malaria Journal, 2006, 5, 110.	2.3	18
112	Toxoplasma gondii acyl-lipid metabolism: de novo synthesis from apicoplast-generated fatty acids versus scavenging of host cell precursors. Biochemical Journal, 2006, 394, 197-205.	3.7	78
113	A configuration space of homologous proteins conserving mutual information and allowing a phylogeny inference based on pair-wise Z-score probabilities. BMC Bioinformatics, 2005, 6, 49.	2.6	23
114	Molecular Modeling and Site-directed Mutagenesis of Plant Chloroplast Monogalactosyldiacylglycerol Synthase Reveal Critical Residues for Activity. Journal of Biological Chemistry, 2005, 280, 34691-34701.	3.4	38
115	Construction of non-symmetric substitution matrices derived from proteomes with biased amino acid distributions. Comptes Rendus - Biologies, 2005, 328, 445-453.	0.2	30
116	Phosphate deprivation induces transfer of DGDG galactolipid from chloroplast to mitochondria. Journal of Cell Biology, 2004, 167, 863-874.	5.2	235
117	Fundamentals of massive automatic pairwise alignments of protein sequences: theoretical significance of Z-value statistics. Bioinformatics, 2004, 20, 534-537.	4.1	33
118	Analysis of the compositional biases in Plasmodium falciparum genome and proteome using Arabidopsis thaliana as a reference. Gene, 2004, 336, 163-173.	2.2	35
119	Transient increase of phosphatidylcholine in plant cells in response to phosphate deprivation. FEBS Letters, 2003, 544, 63-68.	2.8	96
120	Refolding from denatured inclusion bodies, purification to homogeneity and simplified assay of MGDG synthases from land plants. Protein Expression and Purification, 2003, 31, 79-87.	1.3	22
121	Synthesis of Chloroplast Galactolipids in Apicomplexan Parasites. Eukaryotic Cell, 2002, 1, 653-656.	3.4	51
122	The plant S -adenosyl-l -methionine:Mg-protoporphyrin IX methyltransferase is located in both envelope and thylakoid chloroplast membranes. FEBS Journal, 2002, 269, 240-248.	0.2	83
123	The apicoplast: a new member of the plastid family. Trends in Plant Science, 2001, 6, 200-205.	8.8	90
124	1,2-sn-Diacylglycerol in plant cells: Product, substrate and regulator. Plant Physiology and Biochemistry, 1999, 37, 795-808.	5.8	23
125	Biochemical and topological properties of type A MGDG synthase, a spinach chloroplast envelope enzyme catalyzing the synthesis of both prokaryotic and eukaryotic MGDG. FEBS Journal, 1999, 265, 990-1001.	0.2	114
126	Modulation of GT-1 DNA-binding activity by calcium-dependent phosphorylation. Plant Molecular Biology, 1999, 40, 373-386.	3.9	42

#	Article	IF	Citations
127	The Biochemical Machinery of Plastid Envelope Membranes. Plant Physiology, 1998, 118, 715-723.	4.8	168
128	Lipid synthesis and metabolism in the plastid envelope. Physiologia Plantarum, 1997, 100, 65-77.	5.2	85
129	The Catalytic Site of Monogalactosyldiacylglycerol Synthase from Spinach Chloroplast Envelope Membranes. Journal of Biological Chemistry, 1995, 270, 5714-5722.	3.4	34
130	Comparison of the kinetic properties of MGDG synthase in mixed micelles and in envelope membranes from spinach chloroplast. FEBS Letters, 1994, 352, 307-310.	2.8	24
131	Importance of diacylglycerol in glycerolipid biosynthesis by spinach chloroplast envelope membranes. Progress in Lipid Research, 1994, 33, 105-118.	11.6	8