

Patrick Giavalisco

List of Publications by Year in descending order

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117
papers

9,816
citations

31976

53
h-index

39675

94
g-index

124
all docs

124
docs citations

124
times ranked

12677
citing authors

#	ARTICLE	IF	CITATIONS
1	Metabolic resistance to the inhibition of mitochondrial transcription revealed by CRISPR-Cas9 screen. <i>EMBO Reports</i> , 2022, 23, e53054.	4.5	16
2	The AtMYB60 transcription factor regulates stomatal opening by modulating oxylipin synthesis in guard cells. <i>Scientific Reports</i> , 2022, 12, 533.	3.3	12
3	Metabolic control of adult neural stem cell self-renewal by the mitochondrial protease YME1L. <i>Cell Reports</i> , 2022, 38, 110370.	6.4	24
4	Mediobasal hypothalamic FKBP51 acts as a molecular switch linking autophagy to whole-body metabolism. <i>Science Advances</i> , 2022, 8, eabi4797.	10.3	8
5	CLUH controls astrin-1 expression to couple mitochondrial metabolism to cell cycle progression. <i>ELife</i> , 2022, 11, .	6.0	7
6	Stromal NADH supplied by PHOSPHOGLYCERATE DEHYDROGENASE3 is crucial for photosynthetic performance. <i>Plant Physiology</i> , 2021, 186, 142-167.	4.8	16
7	Cellular pyrimidine imbalance triggers mitochondrial DNA-dependent innate immunity. <i>Nature Metabolism</i> , 2021, 3, 636-650.	11.9	64
8	Reduced purine biosynthesis in humans after their divergence from Neandertals. <i>ELife</i> , 2021, 10, .	6.0	12
9	The phosphorylated pathway of serine biosynthesis links plant growth with nitrogen metabolism. <i>Plant Physiology</i> , 2021, 186, 1487-1506.	4.8	20
10	SARS-CoV-2-mediated dysregulation of metabolism and autophagy uncovers host-targeting antivirals. <i>Nature Communications</i> , 2021, 12, 3818.	12.8	172
11	Mass spectrometry-based metabolomics: a guide for annotation, quantification and best reporting practices. <i>Nature Methods</i> , 2021, 18, 747-756.	19.0	403
12	Chromatin remodeling due to degradation of citrate carrier impairs osteogenesis of aged mesenchymal stem cells. <i>Nature Aging</i> , 2021, 1, 810-825.	11.6	37
13	Implication of folate deficiency in CYP2U1 loss of function. <i>Journal of Experimental Medicine</i> , 2021, 218, .	8.5	13
14	The integration of MS-based metabolomics and multivariate data analysis allows for improved quality assessment of <i>Zingiber officinale</i> Roscoe. <i>Phytochemistry</i> , 2021, 190, 112843.	2.9	18
15	Lipidome alterations in human prefrontal cortex during development, aging, and cognitive disorders. <i>Molecular Psychiatry</i> , 2020, 25, 2952-2969.	7.9	66
16	Rapid Affinity Purification of Tagged Plant Mitochondria (Mito-AP) for Metabolome and Proteome Analyses. <i>Plant Physiology</i> , 2020, 182, 1194-1210.	4.8	42
17	Local Fatty Acid Channeling into Phospholipid Synthesis Drives Phagophore Expansion during Autophagy. <i>Cell</i> , 2020, 180, 135-149.e14.	28.9	160
18	Glutamine Metabolism Controls Stem Cell Fate Reversibility and Long-Term Maintenance in the Hair Follicle. <i>Cell Metabolism</i> , 2020, 32, 629-642.e8.	16.2	60

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19	Dnmt3a2/Dnmt3L Overexpression in the Dopaminergic System of Mice Increases Exercise Behavior through Signaling Changes in the Hypothalamus. <i>International Journal of Molecular Sciences</i> , 2020, 21, 6297.	4.1	6
20	Neuronal metabolic rewiring promotes resilience to neurodegeneration caused by mitochondrial dysfunction. <i>Science Advances</i> , 2020, 6, eaba8271.	10.3	47
21	Small-molecule inhibitors of human mitochondrial DNA transcription. <i>Nature</i> , 2020, 588, 712-716.	27.8	115
22	An improved extraction method enables the comprehensive analysis of lipids, proteins, metabolites and phytohormones from a single sample of leaf tissue under water-deficit stress. <i>Plant Journal</i> , 2020, 103, 1614-1632.	5.7	55
23	Mitochondria-Endoplasmic Reticulum Contacts in Reactive Astrocytes Promote Vascular Remodeling. <i>Cell Metabolism</i> , 2020, 31, 791-808.e8.	16.2	79
24	Exploiting Natural Variation in Tomato to Define Pathway Structure and Metabolic Regulation of Fruit Polyphenolics in the <i>Lycopersicon</i> Complex. <i>Molecular Plant</i> , 2020, 13, 1027-1046.	8.3	56
25	Molecular signatures associated with increased freezing tolerance due to low temperature memory in <i>Arabidopsis</i> . <i>Plant, Cell and Environment</i> , 2019, 42, 854-873.	5.7	89
26	Mutation in the <i>Arabidopsis</i> regulatory-associated protein TOR 1B (RAPTOR1B) leads to decreased jasmonates levels in leaf tissue. <i>Plant Signaling and Behavior</i> , 2019, 14, e1649567.	2.4	5
27	TOR inhibition interrupts the metabolic homeostasis by shifting the carbon-nitrogen balance in <i>Chlamydomonas reinhardtii</i> . <i>Plant Signaling and Behavior</i> , 2019, 14, 1670595.	2.4	5
28	A Multi-Omics Extraction Method for the In-Depth Analysis of Synchronized Cultures of the Green Alga <i>Chlamydomonas reinhardtii</i> . <i>Journal of Visualized Experiments</i> , 2019, , .	0.3	4
29	Metabolome signature of autism in the human prefrontal cortex. <i>Communications Biology</i> , 2019, 2, 234.	4.4	42
30	Regulatory-Associated Protein of TOR 1B (RAPTOR1B) regulates hormonal switches during seed germination in <i>Arabidopsis thaliana</i> . <i>Plant Signaling and Behavior</i> , 2019, 14, 1613130.	2.4	4
31	Chloroplast competition is controlled by lipid biosynthesis in evening primroses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 5665-5674.	7.1	39
32	Limited nitrogen availability has cultivar-dependent effects on potato tuber yield and tuber quality traits. <i>Food Chemistry</i> , 2019, 288, 170-177.	8.2	22
33	Differences in lipidome and metabolome organization of prefrontal cortex among human populations. <i>Scientific Reports</i> , 2019, 9, 18348.	3.3	2
34	Comparative Metabolomics Approach Detects Stress-Specific Responses during Coral Bleaching in Soft Corals. <i>Journal of Proteome Research</i> , 2018, 17, 2060-2071.	3.7	25
35	RAPTOR Controls Developmental Growth Transitions by Altering the Hormonal and Metabolic Balance. <i>Plant Physiology</i> , 2018, 177, 565-593.	4.8	66
36	Comprehensive Metabolomics Studies of Plant Developmental Senescence. <i>Methods in Molecular Biology</i> , 2018, 1744, 339-358.	0.9	19

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37	Dose-dependent interactions between two loci trigger altered shoot growth in BC ⁵ –Krotzenburg ⁰ (Kro ⁰) hybrids of <i>Arabidopsis thaliana</i> . <i>New Phytologist</i> , 2018, 217, 392-406.	7.3	12
38	The target of rapamycin kinase affects biomass accumulation and cell cycle progression by altering carbon/nitrogen balance in synchronized <i>Chlamydomonas reinhardtii</i> cells. <i>Plant Journal</i> , 2018, 93, 355-376.	5.7	54
39	Target of Rapamycin Inhibition in <i>Chlamydomonas reinhardtii</i> Triggers de Novo Amino Acid Synthesis by Enhancing Nitrogen Assimilation. <i>Plant Cell</i> , 2018, 30, 2240.1-2254.	6.6	44
40	Semi-targeted Lipidomics of Plant Acyl Lipids Using UPLC-HR-MS in Combination with a Data-Independent Acquisition Mode. <i>Methods in Molecular Biology</i> , 2018, 1778, 137-155.	0.9	7
41	Inhibition of TOR Represses Nutrient Consumption, Which Improves Greening after Extended Periods of Etiolation. <i>Plant Physiology</i> , 2018, 178, 101-117.	4.8	27
42	Imaging Mass Spectrometry for Characterization of Atrial Fibrillation Subtypes. <i>Proteomics - Clinical Applications</i> , 2018, 12, e1700155.	1.6	11
43	Lipidome Evolution in Mammalian Tissues. <i>Molecular Biology and Evolution</i> , 2018, 35, 1947-1957.	8.9	21
44	Bioinformatic and expression analysis of the <i>Brassica napus</i> L. cyclophilins. <i>Scientific Reports</i> , 2017, 7, 1514.	3.3	15
45	Alzheimer's brains show inter-related changes in RNA and lipid metabolism. <i>Neurobiology of Disease</i> , 2017, 106, 1-13.	4.4	43
46	Lipidome determinants of maximal lifespan in mammals. <i>Scientific Reports</i> , 2017, 7, 5.	3.3	60
47	Functional analysis of <i>Brassica napus</i> phloem protein and ribonucleoprotein complexes. <i>New Phytologist</i> , 2017, 214, 1188-1197.	7.3	35
48	Regulatory-associated protein of TOR (<i>RAPTOR</i>) alters the hormonal and metabolic composition of <i>Arabidopsis</i> seeds, controlling seed morphology, viability and germination potential. <i>Plant Journal</i> , 2017, 92, 525-545.	5.7	71
49	A Simple Fractionated Extraction Method for the Comprehensive Analysis of Metabolites, Lipids, and Proteins from a Single Sample. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	40
50	Changes in Lipidome Composition during Brain Development in Humans, Chimpanzees, and Macaque Monkeys. <i>Molecular Biology and Evolution</i> , 2017, 34, 1155-1166.	8.9	28
51	Novel allelic variants in <i>ACD6</i> cause hybrid necrosis in local collection of <i>Arabidopsis thaliana</i> . <i>New Phytologist</i> , 2017, 213, 900-915.	7.3	40
52	Dynamics of lipids and metabolites during the cell cycle of <i>Chlamydomonas reinhardtii</i> . <i>Plant Journal</i> , 2017, 92, 331-343.	5.7	38
53	Protocol: a fast, comprehensive and reproducible one-step extraction method for the rapid preparation of polar and semi-polar metabolites, lipids, proteins, starch and cell wall polymers from a single sample. <i>Plant Methods</i> , 2016, 12, 45.	4.3	150
54	A Transcriptional and Metabolic Framework for Secondary Wall Formation in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2016, 172, pp.01100.2016.	4.8	57

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55	Central role of <i>FaGAMYB</i> in the transition of the strawberry receptacle from development to ripening. <i>New Phytologist</i> , 2015, 208, 482-496.	7.3	62
56	Organization and Evolution of Brain Lipidome Revealed by Large-Scale Analysis of Human, Chimpanzee, Macaque, and Mouse Tissues. <i>Neuron</i> , 2015, 85, 695-702.	8.1	123
57	Integration of transcriptomics and metabolomics data specifies the metabolic response of <i>Chlamydomonas</i> to rapamycin treatment. <i>Plant Journal</i> , 2015, 81, 822-835.	5.7	80
58	Global Analysis of the Role of Autophagy in Cellular Metabolism and Energy Homeostasis in <i>Arabidopsis</i> Seedlings under Carbon Starvation. <i>Plant Cell</i> , 2015, 27, 306-322.	6.6	166
59	Liquid chromatography high-resolution mass spectrometry for fatty acid profiling. <i>Plant Journal</i> , 2015, 81, 529-536.	5.7	54
60	FAX1, a Novel Membrane Protein Mediating Plastid Fatty Acid Export. <i>PLoS Biology</i> , 2015, 13, e1002053.	5.6	162
61	Identification and Mode of Inheritance of Quantitative Trait Loci for Secondary Metabolite Abundance in Tomato. <i>Plant Cell</i> , 2015, 27, 485-512.	6.6	188
62	UPLC-MS analysis of <i>Chlamydomonas reinhardtii</i> and <i>Scenedesmus obliquus</i> lipid extracts and their possible metabolic roles. <i>Journal of Applied Phycology</i> , 2015, 27, 1149-1159.	2.8	12
63	Lipid Biosynthesis and Protein Concentration Respond Uniquely to Phosphate Supply during Leaf Development in Highly Phosphorus-Efficient <i>Hakea prostrata</i> . <i>Plant Physiology</i> , 2014, 166, 1891-1911.	4.8	38
64	MALDI imaging mass spectrometry: Discrimination of pathophysiological regions in traumatized skeletal muscle by characteristic peptide signatures. <i>Proteomics</i> , 2014, 14, 2249-2260.	2.2	46
65	<i>Arabidopsis</i> poly(A) polymerase <i>PAPS1</i> limits founder cell recruitment to organ primordia and suppresses the salicylic acid-independent immune response downstream of <i>EDS1</i> / <i>PAD4</i> . <i>Plant Journal</i> , 2014, 77, 688-699.	5.7	36
66	Systems-Wide Analysis of Acclimation Responses to Long-Term Heat Stress and Recovery in the Photosynthetic Model Organism <i>Chlamydomonas reinhardtii</i> . <i>Plant Cell</i> , 2014, 26, 4270-4297.	6.6	107
67	Consequences of induced brassinosteroid deficiency in <i>Arabidopsis</i> leaves. <i>BMC Plant Biology</i> , 2014, 14, 309.	3.6	17
68	Uric Acid Accumulation in an <i>Arabidopsis</i> Urate Oxidase Mutant Impairs Seedling Establishment by Blocking Peroxisome Maintenance. <i>Plant Cell</i> , 2014, 26, 3090-3100.	6.6	46
69	Diacylglycerol Activates the Light-Dependent Channel TRP in the Photosensitive Microvilli of <i>Drosophila melanogaster</i> Photoreceptors. <i>Journal of Neuroscience</i> , 2014, 34, 6679-6686.	3.6	36
70	The sucrose-trehalose 6-phosphate (Tre6P) nexus: specificity and mechanisms of sucrose signalling by Tre6P. <i>Journal of Experimental Botany</i> , 2014, 65, 1051-1068.	4.8	326
71	Exceptional Evolutionary Divergence of Human Muscle and Brain Metabolomes Parallels Human Cognitive and Physical Uniqueness. <i>PLoS Biology</i> , 2014, 12, e1001871.	5.6	80
72	Analysis of Subcellular Metabolite Distributions Within <i>Arabidopsis thaliana</i> Leaf Tissue: A Primer for Subcellular Metabolomics. <i>Methods in Molecular Biology</i> , 2014, 1062, 575-596.	0.9	28

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73	Neanderthal ancestry drives evolution of lipid catabolism in contemporary Europeans. <i>Nature Communications</i> , 2014, 5, 3584.	12.8	70
74	Low levels of ribosomal rRNA partly account for the very high photosynthetic phosphorus-use efficiency of Proteaceae species. <i>Plant, Cell and Environment</i> , 2014, 37, 1276-1298.	5.7	121
75	Sulphate fertilization ameliorates long-term aluminum toxicity symptoms in perennial ryegrass (<i>Lolium perenne</i>). <i>Plant Physiology and Biochemistry</i> , 2014, 83, 88-99.	5.8	8
76	Two Pdk1 phosphorylation sites on the plant cell death suppressor Adi3 contribute to substrate phosphorylation. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2013, 1834, 1099-1106.	2.3	7
77	Analysis of the Interface between Primary and Secondary Metabolism in <i>Catharanthus roseus</i> Cell Cultures Using ¹³ C-Stable Isotope Feeding and Coupled Mass Spectrometry. <i>Molecular Plant</i> , 2013, 6, 581-584.	8.3	16
78	Systemic analysis of inducible target of rapamycin mutants reveal a general metabolic switch controlling growth in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2013, 73, 897-909.	5.7	205
79	Comprehensive Dissection of Spatiotemporal Metabolic Shifts in Primary, Secondary, and Lipid Metabolism during Developmental Senescence in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2013, 162, 1290-1310.	4.8	278
80	Differential Regulation of Carbon Partitioning by the Central Growth Regulator Target of Rapamycin (TOR). <i>Molecular Plant</i> , 2013, 6, 1731-1733.	8.3	13
81	Long-Distance Signaling in bypass1 Mutants: Bioassay Development Reveals the bps Signal to Be a Metabolite. <i>Molecular Plant</i> , 2013, 6, 164-173.	8.3	17
82	Proteaceae from severely phosphorus-impoverished soils extensively replace phospholipids with galactolipids and sulfolipids during leaf development to achieve a high photosynthetic phosphorus-use efficiency. <i>New Phytologist</i> , 2012, 196, 1098-1108.	7.3	225
83	Differential remodeling of the lipidome during cold acclimation in natural accessions of <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2012, 72, 972-982.	5.7	171
84	High-resolution plant metabolomics: from mass spectral features to metabolites and from whole-cell analysis to subcellular metabolite distributions. <i>Plant Journal</i> , 2012, 70, 39-50.	5.7	151
85	Rapid metabolic evolution in human prefrontal cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 6181-6186.	7.1	82
86	Ultra Performance Liquid Chromatography and High Resolution Mass Spectrometry for the Analysis of Plant Lipids. <i>Frontiers in Plant Science</i> , 2011, 2, 54.	3.6	168
87	Analysis of the compartmentalized metabolome – a validation of the non-aqueous fractionation technique. <i>Frontiers in Plant Science</i> , 2011, 2, 55.	3.6	49
88	Analysis of short-term changes in the <i>Arabidopsis thaliana</i> glycerolipidome in response to temperature and light. <i>Plant Journal</i> , 2011, 66, 656-668.	5.7	113
89	Elemental formula annotation of polar and lipophilic metabolites using ¹³ C, ¹⁵ N and ³⁴ S isotope labelling, in combination with high-resolution mass spectrometry. <i>Plant Journal</i> , 2011, 68, 364-376.	5.7	319
90	Corn hybrids display lower metabolite variability and complex metabolite inheritance patterns. <i>Plant Journal</i> , 2011, 68, 326-336.	5.7	75

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91	Gibberellin biosynthesis and signalling during development of the strawberry receptacle. <i>New Phytologist</i> , 2011, 191, 376-390.	7.3	110
92	Sample amount alternatives for data adjustment in comparative cyanobacterial metabolomics. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 3503-3517.	3.7	32
93	Demethylation of oligogalacturonides by FaPE1 in the fruits of the wild strawberry <i>Fragaria vesca</i> triggers metabolic and transcriptional changes associated with defence and development of the fruit. <i>Journal of Experimental Botany</i> , 2011, 62, 2855-2873.	4.8	55
94	Toward the Storage Metabolome: Profiling the Barley Vacuole. <i>Plant Physiology</i> , 2011, 157, 1469-1482.	4.8	92
95	A Topological Map of the Compartmentalized <i>Arabidopsis thaliana</i> Leaf Metabolome. <i>PLoS ONE</i> , 2011, 6, e17806.	2.5	101
96	SlCCD7 controls strigolactone biosynthesis, shoot branching and mycorrhiza-induced apocarotenoid formation in tomato. <i>Plant Journal</i> , 2010, 61, 300-311.	5.7	227
97	Discrimination of Wine Attributes by Metabolome Analysis. <i>Analytical Chemistry</i> , 2010, 82, 3573-3580.	6.5	103
98	Intersection of the tocopherol and plastoquinol metabolic pathways at the plastoglobule. <i>Biochemical Journal</i> , 2010, 425, 389-399.	3.7	110
99	Metabolomics Unravel Contrasting Effects of Biodiversity on the Performance of Individual Plant Species. <i>PLoS ONE</i> , 2010, 5, e12569.	2.5	114
100	PROTEOMER: A workflow-optimized laboratory information management system for 2D electrophoresis-centered proteomics. <i>Proteomics</i> , 2009, 9, 1795-1808.	2.2	9
101	¹³ C Isotope-Labeled Metabolomes Allowing for Improved Compound Annotation and Relative Quantification in Liquid Chromatography-Mass Spectrometry-based Metabolomic Research. <i>Analytical Chemistry</i> , 2009, 81, 6546-6551.	6.5	175
102	RNA Interference of LIN5 in Tomato Confirms Its Role in Controlling Brix Content, Uncovers the Influence of Sugars on the Levels of Fruit Hormones, and Demonstrates the Importance of Sucrose Cleavage for Normal Fruit Development and Fertility. <i>Plant Physiology</i> , 2009, 150, 1204-1218.	4.8	226
103	High-Resolution Direct Infusion-Based Mass Spectrometry in Combination with Whole ¹³ C Metabolome Isotope Labeling Allows Unambiguous Assignment of Chemical Sum Formulas. <i>Analytical Chemistry</i> , 2008, 80, 9417-9425.	6.5	115
104	<i>Pseudomonas syringae</i> Type III Effector AvrPtoB Is Phosphorylated in Plant Cells on Serine 258, Promoting Its Virulence Activity. <i>Journal of Biological Chemistry</i> , 2007, 282, 30737-30744.	3.4	35
105	High MS-compatibility of silver nitrate-stained protein spots from 2-DE gels using ZipPlates and AnchorChips for successful protein identification. <i>Electrophoresis</i> , 2007, 28, 1607-1614.	2.4	28
106	Towards the proteome of <i>Brassica napus</i> phloem sap. <i>Proteomics</i> , 2006, 6, 896-909.	2.2	237
107	Transformation and other factors of the peptide mass spectrometry pairwise peak-list comparison process. <i>BMC Bioinformatics</i> , 2005, 6, 285.	2.6	17
108	Analysis of xylem sap proteins from <i>Brassica napus</i> . <i>BMC Plant Biology</i> , 2005, 5, 11.	3.6	107

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109	Evaluation of two-dimensional electrophoresis and liquid chromatography - tandem mass spectrometry for tissue-specific protein profiling of laser-microdissected plant samples. <i>Electrophoresis</i> , 2005, 26, 2729-2738.	2.4	81
110	High heterogeneity within the ribosomal proteins of the <i>Arabidopsis thaliana</i> 80S ribosome. <i>Plant Molecular Biology</i> , 2005, 57, 577-591.	3.9	114
111	Proteome analysis of <i>Arabidopsis thaliana</i> by two-dimensional gel electrophoresis and matrix-assisted laser desorption/ionisation-time of flight mass spectrometry. <i>Proteomics</i> , 2005, 5, 1902-1913.	2.2	102
112	Proteomics of curcubit phloem exudate reveals a network of defence proteins. <i>Phytochemistry</i> , 2004, 65, 1795-1804.	2.9	210
113	Extraction of proteins from plant tissues for two-dimensional electrophoresis analysis. <i>Electrophoresis</i> , 2003, 24, 207-216.	2.4	92
114	Protein Identification by MALDI-TOF-MS Peptide Mapping: A New Strategy. <i>Analytical Chemistry</i> , 2002, 74, 1760-1771.	6.5	53
115	Intra- and Interspecific Variation in Primate Gene Expression Patterns. <i>Science</i> , 2002, 296, 340-343.	12.6	813
116	Large-scale plant proteomics. <i>Plant Molecular Biology</i> , 2002, 48, 133-141.	3.9	92
117	Large-gel two-dimensional electrophoresis-matrix assisted laser desorption/ionization-time of flight-mass spectrometry: An analytical challenge for studying complex protein mixtures. <i>Electrophoresis</i> , 2001, 22, 2844-2855.	2.4	82