

Toshihiro Obata

List of Publications by Year in descending order

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86
papers

6,005
citations

76326

40
h-index

76900

74
g-index

95
all docs

95
docs citations

95
times ranked

8070
citing authors

#	ARTICLE	IF	CITATIONS
1	Genome-wide mediation analysis: an empirical study to connect phenotype with genotype via intermediate transcriptomic data in maize. <i>Genetics</i> , 2022, 221, .	2.9	8
2	Systems biology reveals key tissue-specific metabolic and transcriptional signatures involved in the response of <i>Medicago truncatula</i> plant genotypes to salt stress. <i>Computational and Structural Biotechnology Journal</i> , 2021, 19, 2133-2147.	4.1	15
3	Phytochromes control metabolic flux, and their action at the seedling stage determines adult plant biomass. <i>Journal of Experimental Botany</i> , 2021, 72, 3263-3278.	4.8	6
4	Vision, challenges and opportunities for a Plant Cell Atlas. <i>ELife</i> , 2021, 10, .	6.0	31
5	Association of the malate dehydrogenase-citrate synthase metabolon is modulated by intermediates of the Krebs tricarboxylic acid cycle. <i>Scientific Reports</i> , 2021, 11, 18770.	3.3	8
6	A novel seed plants gene regulates oxidative stress tolerance in <i>Arabidopsis thaliana</i> . <i>Cellular and Molecular Life Sciences</i> , 2020, 77, 705-718.	5.4	11
7	Toward an evaluation of metabolite channeling in vivo. <i>Current Opinion in Biotechnology</i> , 2020, 64, 55-61.	6.6	16
8	Assessing durum wheat ear and leaf metabolomes in the field through hyperspectral data. <i>Plant Journal</i> , 2020, 102, 615-630.	5.7	35
9	Downregulation of a Mitochondrial NAD ⁺ Transporter (NDT2) Alters Seed Production and Germination in <i>Arabidopsis</i> . <i>Plant and Cell Physiology</i> , 2020, 61, 897-908.	3.1	19
10	Synthetic analogues of 2-oxo acids discriminate metabolic contribution of the 2-oxoglutarate and 2-oxoadipate dehydrogenases in mammalian cells and tissues. <i>Scientific Reports</i> , 2020, 10, 1886.	3.3	21
11	Metabolic profiles of six African cultivars of cassava (<i>Manihot esculenta</i> Crantz) highlight bottlenecks of root yield. <i>Plant Journal</i> , 2020, 102, 1202-1219.	5.7	27
12	Metabolome Profiling Supports the Key Role of the Spike in Wheat Yield Performance. <i>Cells</i> , 2020, 9, 1025.	4.1	20
13	Enhanced N ⁶ -metabolites, ABA and IAA conjugate in anthers instigate heat sensitivity in spring wheat. <i>Physiologia Plantarum</i> , 2020, 169, 501-514.	5.2	15
14	<i>MADS78</i> and <i>MADS79</i> Are Essential Regulators of Early Seed Development in Rice. <i>Plant Physiology</i> , 2020, 182, 933-948.	4.8	49
15	Biochemical and functional characterization of a mitochondrial citrate carrier in <i>Arabidopsis thaliana</i> . <i>Biochemical Journal</i> , 2020, 477, 1759-1777.	3.7	13
16	The Lack of Mitochondrial Thioredoxin TRXo1 Affects In Vivo Alternative Oxidase Activity and Carbon Metabolism under Different Light Conditions. <i>Plant and Cell Physiology</i> , 2019, 60, 2369-2381.	3.1	35
17	The mitochondrial NAD ⁺ transporter (NDT1) plays important roles in cellular NAD ⁺ homeostasis in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2019, 100, 487-504.	5.7	34
18	Metabolons in plant primary and secondary metabolism. <i>Phytochemistry Reviews</i> , 2019, 18, 1483-1507.	6.5	52

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19	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
20	Appropriate Thiamin Pyrophosphate Levels Are Required for Acclimation to Changes in Photoperiod. <i>Plant Physiology</i> , 2019, 180, 185-197.	4.8	24
21	Metabolite profiles reveal interspecific variation in operation of the Calvin-Benson cycle in both C4 and C3 plants. <i>Journal of Experimental Botany</i> , 2019, 70, 1843-1858.	4.8	47
22	NTRC Plays a Crucial Role in Starch Metabolism, Redox Balance, and Tomato Fruit Growth. <i>Plant Physiology</i> , 2019, 181, 976-992.	4.8	18
23	Cassava Metabolomics and Starch Quality. <i>Current Protocols in Plant Biology</i> , 2019, 4, e20102.	2.8	16
24	Metabolic Dynamics of Developing Rice Seeds Under High Night-Time Temperature Stress. <i>Frontiers in Plant Science</i> , 2019, 10, 1443.	3.6	50
25	The Role of Abscisic Acid Signaling in Maintaining the Metabolic Balance Required for Arabidopsis Growth under Nonstress Conditions. <i>Plant Cell</i> , 2019, 31, 84-105.	6.6	84
26	Carbon balance and source-sink metabolic changes in winter wheat exposed to high night-time temperature. <i>Plant, Cell and Environment</i> , 2019, 42, 1233-1246.	5.7	91
27	Uncoupling proteins 1 and 2 (UCP1 and UCP2) from <i>Arabidopsis thaliana</i> are mitochondrial transporters of aspartate, glutamate, and dicarboxylates. <i>Journal of Biological Chemistry</i> , 2018, 293, 4213-4227.	3.4	81
28	Metabolic diversity in tuber tissues of native Chilo potatoes and commercial cultivars of <i>Solanum tuberosum</i> ssp. <i>tuberosum</i> L.. <i>Metabolomics</i> , 2018, 14, 138.	3.0	7
29	An L,L-diaminopimelate aminotransferase mutation leads to metabolic shifts and growth inhibition in <i>Arabidopsis</i> . <i>Journal of Experimental Botany</i> , 2018, 69, 5489-5506.	4.8	5
30	Combined drought and virus infection trigger aspects of respiratory metabolism related to grapevine physiological responses. <i>Journal of Plant Physiology</i> , 2018, 231, 19-30.	3.5	7
31	The Extra-Pathway Interactome of the TCA Cycle: Expected and Unexpected Metabolic Interactions. <i>Plant Physiology</i> , 2018, 177, 966-979.	4.8	81
32	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
33	Dissecting metabolic flux in C4 plants: experimental and theoretical approaches. <i>Phytochemistry Reviews</i> , 2018, 17, 1253-1274.	6.5	6
34	The transcription factor bZIP14 regulates the TCA cycle in the diatom <i>Phaeodactylum tricornutum</i> . <i>EMBO Journal</i> , 2017, 36, 1559-1576.	7.8	64
35	Growth rate correlates negatively with protein turnover in <i>Arabidopsis</i> accessions. <i>Plant Journal</i> , 2017, 91, 416-429.	5.7	58
36	Protein-protein interactions and metabolite channelling in the plant tricarboxylic acid cycle. <i>Nature Communications</i> , 2017, 8, 15212.	12.8	103

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37	The conserved domain in MORF proteins has distinct affinities to the PPR and E elements in PPR RNA editing factors. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2017, 1860, 813-828.	1.9	42
38	Quantification of Photorespiratory Intermediates by Mass Spectrometry-Based Approaches. <i>Methods in Molecular Biology</i> , 2017, 1653, 97-104.	0.9	2
39	Coupling Radiotracer Experiments with Chemical Fractionation for the Estimation of Respiratory Fluxes. <i>Methods in Molecular Biology</i> , 2017, 1670, 17-30.	0.9	8
40	Investigating mixotrophic metabolism in the model diatom <i>Phaeodactylum tricornutum</i> . <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017, 372, 20160404.	4.0	85
41	A Novel Mechanism, Linked to Cell Density, Largely Controls Cell Division in <i>Synechocystis</i> . <i>Plant Physiology</i> , 2017, 174, 2166-2182.	4.8	15
42	Metabolite pools and carbon flow during C ⁴ photosynthesis in maize: ¹³ CO ₂ labeling kinetics and cell type fractionation. <i>Journal of Experimental Botany</i> , 2017, 68, 283-298.	4.8	104
43	Starch Granule Re-Structuring by Starch Branching Enzyme and Glucan Water Dikinase Modulation Affects Caryopsis Physiology and Metabolism. <i>PLoS ONE</i> , 2016, 11, e0149613.	2.5	30
44	A sucrose transporter-interacting protein disulphide isomerase affects redox homeostasis and links sucrose partitioning with abiotic stress tolerance. <i>Plant, Cell and Environment</i> , 2016, 39, 1366-1380.	5.7	21
45	On the metabolic interactions of (photo)respiration. <i>Journal of Experimental Botany</i> , 2016, 67, 3003-3014.	4.8	59
46	Allelic differences in a vacuolar invertase affect Arabidopsis growth at early plant development. <i>Journal of Experimental Botany</i> , 2016, 67, 4091-4103.	4.8	20
47	Regulation of Primary Metabolism in Response to Low Oxygen Availability as Revealed by Carbon and Nitrogen Isotope Redistribution. <i>Plant Physiology</i> , 2016, 170, 43-56.	4.8	105
48	Metabolic responses of Arabidopsis thaliana roots and leaves to sublethal cadmium exposure are differentially influenced by ALTERNATIVE OXIDASE1a. <i>Environmental and Experimental Botany</i> , 2016, 124, 64-78.	4.2	32
49	Kresoxim-methyl primes <i>Medicago truncatula</i> plants against abiotic stress factors via altered reactive oxygen and nitrogen species signalling leading to downstream transcriptional and metabolic readjustment. <i>Journal of Experimental Botany</i> , 2016, 67, 1259-1274.	4.8	33
50	Transcriptional Orchestration of the Global Cellular Response of a Model Pennate Diatom to Diel Light Cycling under Iron Limitation. <i>PLoS Genetics</i> , 2016, 12, e1006490.	3.5	129
51	Quantifying Protein Synthesis and Degradation in Arabidopsis by Dynamic ¹³ CO ₂ Labeling and Analysis of Enrichment in Individual Amino Acids in Their Free Pools and in Protein. <i>Plant Physiology</i> , 2015, 168, 74-93.	4.8	132
52	Complete Mitochondrial Complex I Deficiency Induces an Up-Regulation of Respiratory Fluxes That Is Abolished by Traces of Functional Complex I. <i>Plant Physiology</i> , 2015, 168, 1537-1549.	4.8	113
53	Thioredoxin, a master regulator of the tricarboxylic acid cycle in plant mitochondria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E1392-400.	7.1	179
54	Selective Homo- and Heteromer Interactions between the Multiple Organellar RNA Editing Factor (MORF) Proteins in Arabidopsis thaliana. <i>Journal of Biological Chemistry</i> , 2015, 290, 6445-6456.	3.4	53

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55	Functional characterization and organ distribution of three mitochondrial ATP-Mg/Pi carriers in <i>Arabidopsis thaliana</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015, 1847, 1220-1230.	1.0	33
56	Metabolite profiles of maize leaves in drought, heat and combined stress field trials reveal the relationship between metabolism and grain yield. <i>Plant Physiology</i> , 2015, 169, pp.01164.2015.	4.8	233
57	Consequences of induced brassinosteroid deficiency in <i>Arabidopsis</i> leaves. <i>BMC Plant Biology</i> , 2014, 14, 309.	3.6	17
58	Biosynthesis of the Essential Respiratory Cofactor Ubiquinone from Phenylalanine in Plants. <i>Molecular Plant</i> , 2014, 7, 1403-1405.	8.3	8
59	The life of plant mitochondrial complex I. <i>Mitochondrion</i> , 2014, 19, 295-313.	3.4	103
60	Systems analysis of metabolic phenotypes: what have we learnt?. <i>Trends in Plant Science</i> , 2014, 19, 222-230.	8.8	40
61	Analysis of Kinetic Labeling of Amino Acids and Organic Acids by GC-MS. <i>Methods in Molecular Biology</i> , 2014, 1090, 107-119.	0.9	9
62	Molecular mechanisms of desiccation tolerance in the resurrection glacial relic <i>Haberlea rhodopensis</i> . <i>Cellular and Molecular Life Sciences</i> , 2013, 70, 689-709.	5.4	168
63	<i>MULTIPASS</i> , a rice R2R3-type MYB transcription factor, regulates adaptive growth by integrating multiple hormonal pathways. <i>Plant Journal</i> , 2013, 76, 258-273.	5.7	74
64	<i>TIME FOR COFFEE</i> is an essential component in the maintenance of metabolic homeostasis in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2013, 76, 188-200.	5.7	79
65	Regulation of the mitochondrial tricarboxylic acid cycle. <i>Current Opinion in Plant Biology</i> , 2013, 16, 335-343.	7.1	141
66	Diurnal Changes of Polysome Loading Track Sucrose Content in the Rosette of Wild-Type <i>Arabidopsis</i> and the Starchless <i>pgm</i> Mutant. <i>Plant Physiology</i> , 2013, 162, 1246-1265.	4.8	133
67	SALT-RESPONSIVE ERF1 Regulates Reactive Oxygen Species-Dependent Signaling during the Initial Response to Salt Stress in Rice. <i>Plant Cell</i> , 2013, 25, 2115-2131.	6.6	289
68	Comparative metabolic profiling of <i>Haberlea rhodopensis</i> , <i>Thellungiella halophyla</i> , and <i>Arabidopsis thaliana</i> exposed to low temperature. <i>Frontiers in Plant Science</i> , 2013, 4, 499.	3.6	57
69	<i>PLGG1</i> , a plastidic glycolate glycerate transporter, is required for photorespiration and defines a unique class of metabolite transporters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3185-3190.	7.1	141
70	The Central Carbon and Energy Metabolism of Marine Diatoms. <i>Metabolites</i> , 2013, 3, 325-346.	2.9	59
71	Gas-Chromatography Mass-Spectrometry (GC-MS) Based Metabolite Profiling Reveals Mannitol as a Major Storage Carbohydrate in the Coccolithophorid Alga <i>Emiliania huxleyi</i> . <i>Metabolites</i> , 2013, 3, 168-184.	2.9	32
72	Downregulation of the $\hat{\gamma}$ -Subunit Reduces Mitochondrial ATP Synthase Levels, Alters Respiration, and Restricts Growth and Gametophyte Development in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2012, 24, 2792-2811.	6.6	66

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73	Decreasing the Mitochondrial Synthesis of Malate in Potato Tubers Does Not Affect Plastidial Starch Synthesis, Suggesting That the Physiological Regulation of ADPGlucose Pyrophosphorylase Is Context Dependent. <i>Plant Physiology</i> , 2012, 160, 2227-2238.	4.8	14
74	Leveraging metabolomics for functional investigations in sequenced marine diatoms. <i>Trends in Plant Science</i> , 2012, 17, 395-403.	8.8	23
75	The use of metabolomics to dissect plant responses to abiotic stresses. <i>Cellular and Molecular Life Sciences</i> , 2012, 69, 3225-3243.	5.4	680
76	Metabolic recovery of <i>Arabidopsis thaliana</i> roots following cessation of oxidative stress. <i>Metabolomics</i> , 2012, 8, 143-153.	3.0	57
77	A Reciprocal ¹⁵ N-Labeling Proteomic Analysis of Expanding <i>Arabidopsis</i> Leaves Subjected to Osmotic Stress Indicates Importance of Mitochondria in Preserving Plastid Functions. <i>Journal of Proteome Research</i> , 2011, 10, 1018-1029.	3.7	38
78	Antisense Suppression of the Small Chloroplast Protein CP12 in Tobacco Alters Carbon Partitioning and Severely Restricts Growth. <i>Plant Physiology</i> , 2011, 157, 620-631.	4.8	39
79	Alteration of mitochondrial protein complexes in relation to metabolic regulation under short-term oxidative stress in <i>Arabidopsis</i> seedlings. <i>Phytochemistry</i> , 2011, 72, 1081-1091.	2.9	66
80	Smart PEGylation of Trypsin. <i>Biomacromolecules</i> , 2010, 11, 2130-2135.	5.4	67
81	Identification of the 2-Hydroxyglutarate and Isovaleryl-CoA Dehydrogenases as Alternative Electron Donors Linking Lysine Catabolism to the Electron Transport Chain of <i>Arabidopsis</i> Mitochondria. <i>Plant Cell</i> , 2010, 22, 1549-1563.	6.6	296
82	The Metabolic Response of <i>Arabidopsis</i> Roots to Oxidative Stress is Distinct from that of Heterotrophic Cells in Culture and Highlights a Complex Relationship between the Levels of Transcripts, Metabolites, and Flux. <i>Molecular Plant</i> , 2009, 2, 390-406.	8.3	155
83	Developmental Stage Specificity and the Role of Mitochondrial Metabolism in the Response of <i>Arabidopsis</i> Leaves to Prolonged Mild Osmotic Stress. <i>Plant Physiology</i> , 2009, 152, 226-244.	4.8	269
84	Rice Shaker Potassium Channel OsKAT1 Confers Tolerance to Salinity Stress on Yeast and Rice Cells. <i>Plant Physiology</i> , 2007, 144, 1978-1985.	4.8	138
85	A Novel Eukaryotic Selenoprotein in the Haptophyte Alga <i>Emiliania huxleyi</i> . <i>Journal of Biological Chemistry</i> , 2005, 280, 18462-18468.	3.4	46
86	Bioconcentration Mechanism of Selenium by a Coccolithophorid, <i>Emiliania huxleyi</i> . <i>Plant and Cell Physiology</i> , 2004, 45, 1434-1441.	3.1	35