Robert D Hall

List of Publications by Year
in descending order

142 papers	13,502 citations	31976 53 h-index	22832 112 g-index
163 all docs	163 docs citations	163 times ranked	14585 citing authors

#	Article	IF	Citations
1	Enrichment of tomato fruit with health-promoting anthocyanins by expression of select transcription factors. Nature Biotechnology, 2008, 26, 1301-1308.	17.5	1,030
2	Plant molecular stress responses face climate change. Trends in Plant Science, 2010, 15, 664-674.	8.8	832
3	Untargeted large-scale plant metabolomics using liquid chromatography coupled to mass spectrometry. Nature Protocols, 2007, 2, 778-791.	12.0	803
4	Potential of metabolomics as a functional genomics tool. Trends in Plant Science, 2004, 9, 418-425.	8.8	685
5	Not just a grain of rice: the quest for quality. Trends in Plant Science, 2009, 14, 133-139.	8.8	643
6	A Novel Approach for Nontargeted Data Analysis for Metabolomics. Large-Scale Profiling of Tomato Fruit Volatiles. Plant Physiology, 2005, 139, 1125-1137.	4.8	471
7	The genetics of plant metabolism. Nature Genetics, 2006, 38, 842-849.	21.4	454
8	Plant metabolomics: from holistic hope, to hype, to hot topic. New Phytologist, 2006, 169, 453-468.	7.3	430
9	Mass spectrometry-based metabolomics: a guide for annotation, quantification and best reporting practices. Nature Methods, 2021, 18, 747-756.	19.0	403
10	De novo production of the flavonoid naringenin in engineered Saccharomyces cerevisiae. Microbial Cell Factories, 2012, 11, 155.	4.0	302
11	Changes in Antioxidant and Metabolite Profiles during Production of Tomato Paste. Journal of Agricultural and Food Chemistry, 2008, 56, 964-973.	5.2	287
12	A proposed framework for the description of plant metabolomics experiments and their results. Nature Biotechnology, 2004, 22, 1601-1606.	17.5	283
13	Diversity of Global Rice Markets and the Science Required for Consumer-Targeted Rice Breeding. PLoS ONE, 2014, 9, e85106.	2.5	229
14	The lightâ€hyperresponsive high pigmentâ€2 dg mutation of tomato: alterations in the fruit metabolome. New Phytologist, 2005, 166, 427-438.	7.3	207
15	Metabolite identification: are you sure? And how do your peers gauge your confidence?. Metabolomics, 2014, 10, 350-353.	3.0	205
16	MSClust: a tool for unsupervised mass spectra extraction of chromatography-mass spectrometry ion-wise aligned data. Metabolomics, 2012, 8, 714-718.	3.0	193
17	Tissue specialization at the metabolite level is perceived during the development of tomato fruit. Journal of Experimental Botany, 2007, 58, 4131-4146.	4.8	189
18	Production of Resveratrol in Recombinant Microorganisms. Applied and Environmental Microbiology, 2006, 72, 5670-5672.	3.1	180

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19	Metabolic engineering of flavonoids in tomato (Solanum lycopersicum): the potential for metabolomics. Metabolomics, 2007, 3, 399-412.	3.0	176
20	Antioxidants in Raspberry:â€‰ On-Line Analysis Links Antioxidant Activity to a Diversity of Individual Metabolites. Journal of Agricultural and Food Chemistry, 2005, 53, 3313-3320.	5.2	173
21	Plant metabolomics and its potential application for human nutrition. Physiologia Plantarum, 2008, 132, 162-175.	5.2	169
22	Improved batch correction in untargeted MS-based metabolomics. Metabolomics, 2016, 12, 88.	3.0	167
23	A Review on the Effect of Drying on Antioxidant Potential of Fruits and Vegetables. Critical Reviews in Food Science and Nutrition, 2016, 56, S110-S129.	10.3	167
24	High level fructan accumulation in a transgenic sugar beet. Nature Biotechnology, 1998, 16, 843-846.	17.5	127
25	Mass spectrometry-based metabolomics of volatiles as a new tool for understanding aroma and flavour chemistry in processed food products. Metabolomics, 2019, 15, 41.	3.0	125
26	Gene expression during anthesis and senescence in Iris flowers. Plant Molecular Biology, 2003, 53, 845-863.	3.9	123
27	Sucrose prevents up-regulation of senescence-associated genes in carnation petals. Journal of Experimental Botany, 2007, 58, 2873-2885.	4.8	120
28	Extensive metabolic crossâ€talk in melon fruit revealed by spatial and developmental combinatorial metabolomics. New Phytologist, 2011, 190, 683-696.	7.3	111
29	Polycistronic expression of a Î²-carotene biosynthetic pathway in Saccharomyces cerevisiae coupled to Î²-ionone production. Journal of Biotechnology, 2014, 192, 383-392.	3.8	110
30	NON-SMOKY GLYCOSYLTRANSFERASE1 Prevents the Release of Smoky Aroma from Tomato Fruit. Plant Cell, 2013, 25, 3067-3078.	6.6	108
31	Chemical and Sensory Characteristics of Soy Sauce: A Review. Journal of Agricultural and Food Chemistry, 2020, 68, 11612-11630.	5.2	104
32	The Effect of Industrial Food Processing on Potentially Health-Beneficial Tomato Antioxidants. Critical Reviews in Food Science and Nutrition, 2010, 50, 919-930.	10.3	96
33	Identification and dietary relevance of antioxidants from raspberry. BioFactors, 2005, 23, 197-205.	5.4	94
34	Tuber on a chip: differential gene expression during potato tuber development. Plant Biotechnology Journal, 2005, 3, 505-519.	8.3	86
35	A Role for Differential Glycoconjugation in the Emission of Phenylpropanoid Volatiles from Tomato Fruit Discovered Using a Metabolic Data Fusion Approach. Plant Physiology, 2009, 152, 55-70.	4.8	86
36	A high efficiency technique for the generation of transgenic sugar beets from stomatal guard cells. Nature Biotechnology, 1996, 14, 1133-1138.	17.5	81

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37	Alignment and statistical difference analysis of complex peptide data sets generated by multidimensional LC-MS. Proteomics, 2006, 6, 641-653.	2.2	81
38	Microbial production of natural raspberry ketone. Biotechnology Journal, 2007, 2, 1270-1279.	3.5	81
39	Characterization of Rhamnosidases from <i>Lactobacillus plantarum</i> and <i>Lactobacillus acidophilus</i>. Applied and Environmental Microbiology, 2009, 75, 3447-3454.	3.1	81
40	Plant Metabolomics and Its Potential for Systems Biology Research. Methods in Enzymology, 2011, 500, 299-336.	1.0	78
41	Preprocessing and exploratory analysis of chromatographic profiles of plant extracts. Analytica Chimica Acta, 2005, 545, 53-64.	5.4	75
42	Metabolomic and elemental profiling of melon fruit quality as affected by genotype and environment. Metabolomics, 2013, 9, 57-77.	3.0	74
43	A non-directed approach to the differential analysis of multiple LCâ€“MS-derived metabolic profiles. Metabolomics, 2005, 1, 169-180.	3.0	73
44	Changes in polyphenol content during production of grape juice concentrate. Food Chemistry, 2013, 139, 521-526.	8.2	71
45	Metabolomics in melon: A new opportunity for aroma analysis. Phytochemistry, 2014, 99, 61-72.	2.9	66
46	Industrial processing versus home processing of tomato sauce: Effects on phenolics, flavonoids and in vitro bioaccessibility of antioxidants. Food Chemistry, 2017, 220, 51-58.	8.2	66
47	The Time Is Right to Focus on Model Organism Metabolomes. Metabolites, 2016, 6, 8.	2.9	63
48	The effects of juice processing on black mulberry antioxidants. Food Chemistry, 2015, 186, 277-284.	8.2	60
49	Comprehensive metabolomics to evaluate the impact of industrial processing on the phytochemical composition of vegetable purees. Food Chemistry, 2015, 168, 348-355.	8.2	60
50	Transgenic Flavonoid Tomato Intake Reduces C-Reactive Protein in Human C-Reactive Protein Transgenic Mice More Than Wild-Type Tomato. Journal of Nutrition, 2006, 136, 2331-2337.	2.9	58
51	Engineering de novo anthocyanin production in Saccharomyces cerevisiae. Microbial Cell Factories, 2018, 17, 103.	4.0	58
52	Changes in sour cherry (Prunus cerasus L.) antioxidants during nectar processing and in vitro gastrointestinal digestion. Journal of Functional Foods, 2013, 5, 1402-1413.	3.4	56
53	Transfer of cytoplasm from newBeta CMS sources to sugar beet by asymmetric fusion. Theoretical and Applied Genetics, 1990, 79, 390-396.	3.6	54
54	The potential of rice to offer solutions for malnutrition and chronic diseases. Rice, 2012, 5, 16.	4.0	54

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55	Green and White Asparagus (Asparagus officinalis): A Source of Developmental, Chemical and Urinary Intrigue. Metabolites, 2020, 10, 17.	2.9	54
56	Effect of dietary fiber (inulin) addition on phenolics and in vitro bioaccessibility of tomato sauce. Food Research International, 2018, 106, 129-135.	6.2	52
57	Intercellular and Intercultural Heterogeneity in Secondary Metabolite Accumulation in Cultures ofCatharanthus roseusfollowing Cell Line Selection. Journal of Experimental Botany, 1987, 38, 1391-1398.	4.8	51
58	Industrial processing effects on phenolic compounds in sour cherry (Prunus cerasus L.) fruit. Food Research International, 2013, 53, 218-225.	6.2	51
59	Spatially Resolved Plant Metabolomics: Some Potentials and Limitations of Laser-Ablation Electrospray Ionization Mass Spectrometry Metabolite Imaging Â. Plant Physiology, 2015, 169, 1424-1435.	4.8	50
60	Temporal and Spatial Heterogeneity in the Accumulation of Anthocyanins in Cell Cultures ofCatharanthus roseus(L.) G.Don.. Journal of Experimental Botany, 1986, 37, 48-60.	4.8	48
61	The effect of exogenously-applied phytohormones on gene transfer efficiency in sugarbeet (Beta) Tj ETQq1 1 0.784314 rgBT /Overloc	3.6	47
62	Evidence for a hydrogen-sink mechanism of (+)catechin-mediated emission reduction of the ruminant greenhouse gas methane. Metabolomics, 2014, 10, 179-189.	3.0	45
63	High-throughput plant phenotyping: a role for metabolomics?. Trends in Plant Science, 2022, 27, 549-563.	8.8	44
64	A genomics and multi-platform metabolomics approach to identify new traits of rice quality in traditional and improved varieties. Metabolomics, 2012, 8, 771-783.	3.0	43
65	Processing black mulberry into jam: effects on antioxidant potential and <i>in vitro</i> bioaccessibility. Journal of the Science of Food and Agriculture, 2017, 97, 3106-3113.	3.5	43
66	Transcription Factor-Mediated Control of Anthocyanin Biosynthesis in Vegetative Tissues. Plant Physiology, 2018, 176, 1862-1878.	4.8	41
67	FACTORS DETERMINING ANTHOCYANIN YIELD IN CELL CULTURES OF CATHARANTHUSROSEUS (L.)G. DON.. New Phytologist, 1986, 103, 33-43.	7.3	38
68	Control of anthocyanin and non-flavonoid compounds by anthocyanin-regulating MYB and bHLH transcription factors in Nicotiana benthamiana leaves. Frontiers in Plant Science, 2014, 5, 519.	3.6	38
69	Accurate mass error correction in liquid chromatography time-of-flight mass spectrometry based metabolomics. Metabolomics, 2008, 4, 171-182.	3.0	37
70	Automated procedure for candidate compound selection in GC-MS metabolomics based on prediction of Kovats retention index. Bioinformatics, 2009, 25, 787-794.	4.1	37
71	An <i>Oâ€‹</i>methyltransferase modifies accumulation of methylated anthocyanins in seedlings of tomato. Plant Journal, 2014, 80, 695-708.	5.7	37
72	Investigating the Transport Dynamics of Anthocyanins from Unprocessed Fruit and Processed Fruit Juice from Sour Cherry (<i>Prunus cerasus</i> L.) across Intestinal Epithelial Cells. Journal of Agricultural and Food Chemistry, 2013, 61, 11434-11441.	5.2	36

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73	The accumulation of phenylpropanoid and capsaicinoid compounds in cell cultures and whole fruit of the chilli pepper, Capsicum frutescens Mill. Plant Cell, Tissue and Organ Culture, 1987, 8, 163-176.	2.3	35
74	Comparative Metabolomics and Molecular Phylogenetics of Melon (Cucumis melo, Cucurbitaceae) Biodiversity. Metabolites, 2020, 10, 121.	2.9	35
75	Towards superior plant-based foods using metabolomics. Current Opinion in Biotechnology, 2021, 70, 23-28.	6.6	35
76	Comparison of volatile trapping techniques for the comprehensive analysis of food flavourings by Gas Chromatography-Mass Spectrometry. Journal of Chromatography A, 2020, 1624, 461191.	3.7	35
77	Procyanidins in fruit from Sour cherry (Prunus cerasus) differ strongly in chainlength from those in Laurel cherry (Prunus lauracerasus) and Cornelian cherry (Cornus mas). Journal of Berry Research, 2011, 1, 137-146.	1.4	34
78	Metabolic responses of <i>Eucalyptus</i> species to different temperature regimes. Journal of Integrative Plant Biology, 2018, 60, 397-411.	8.5	34
79	Computer-Assisted Identification of Protoplasts Responsible for Rare Division Events Reveals Guard-Cell Totipotency. Plant Physiology, 1995, 107, 1379-1386.	4.8	33
80	Factors influencing cDNA microarray hybridization on silylated glass slides. Analytical Biochemistry, 2002, 308, 5-17.	2.4	32
81	Metabolomics reveals organ-specific metabolic rearrangements during early tomato seedling development. Metabolomics, 2014, 10, 958-974.	3.0	32
82	Asymmetric somatic cell hybridization in plants. Molecular Genetics and Genomics, 1992, 234, 315-324.	2.4	30
83	Delving deeper into technological innovations to understand differences in rice quality. Rice, 2015, 8, 43.	4.0	30
84	Metabolomics should be deployed in the identification and characterization of geneâ€edited crops. Plant Journal, 2020, 102, 897-902.	5.7	30
85	Identification of Bioactive Phytochemicals in Mulberries. Metabolites, 2020, 10, 7.	2.9	30
86	Multi-platform metabolomics analyses of a broad collection of fragrant and non-fragrant rice varieties reveals the high complexity of grain quality characteristics. Metabolomics, 2016, 12, 38.	3.0	28
87	Coffee berry and green bean chemistry â€“ Opportunities for improving cup quality and crop circularity. Food Research International, 2022, 151, 110825.	6.2	27
88	Asymmetric somatic cell hybridization in plants. Molecular Genetics and Genomics, 1992, 234, 306-314.	2.4	26
89	Maltodextrin improves physical properties and volatile compound retention of spray-dried asparagus concentrate. LWT - Food Science and Technology, 2021, 142, 111058.	5.2	25
90	The influence of intracellular pools of phenylalanine derivatives upon the synthesis of capsaicin by immobilized cell cultures of the chilli pepper, Capsicum frutescens. Planta, 1991, 185, 72-80.	3.2	24

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91	Stomatal Guard Cells Are Totipotent. Plant Physiology, 1996, 112, 889-892.	4.8	23
92	Asymmetric protoplast fusion aimed at intraspecific transfer of cytoplasmic male sterility (CMS) in Lolium perenne L.. Theoretical and Applied Genetics, 1992, 84-84, 763-770.	3.6	22
93	Metabolism of carotenoids and apocarotenoids during ripening of raspberry fruit. BioFactors, 2008, 34, 57-66.	5.4	22
94	Improvement of protoplast culture protocols for Beta vulgaris L. (sugar beet). Plant Cell Reports, 1993, 12, 339-42.	5.6	21
95	Sugar beet guard cell protoplasts demonstrate a remarkable capacity for cell division enabling applications in stomatal physiology and molecular breeding. Journal of Experimental Botany, 1997, 48, 255-263.	4.8	20
96	High-Performance Liquid Chromatographyâ€"Mass Spectrometry Analysis of Plant Metabolites in Brassicaceae. Methods in Molecular Biology, 2011, 860, 111-128.	0.9	17
97	DNA radiation damage and asymmetric somatic hybridization: Is UV a potential substitute or supplement to ionising radiation in fusion experiments?. Physiologia Plantarum, 1992, 85, 319-324.	5.2	16
98	Plant Metabolomics Strategies Based upon Quadrupole Time of Flight Mass Spectrometry (QTOF-MS). , 2006, , 33-48.		16
99	Plant metabolomics is not ripe for environmental risk assessment. Trends in Biotechnology, 2014, 32, 391-392.	9.3	16
100	Arabidopsis myrosinases link the glucosinolate-myrosinase system and the cuticle. Scientific Reports, 2016, 6, 38990.	3.3	16
101	Analyses of metabolic activity in peanuts under hermetic storage at different relative humidity levels. Food Chemistry, 2022, 373, 131020.	8.2	16
102	Variation in secondary metabolites in a unique set of tomato accessions collected in Turkey. Food Chemistry, 2020, 317, 126406.	8.2	15
103	Solid Phase Micro-Extraction GCâ€"MS Analysis of Natural Volatile Components in Melon and Rice. Methods in Molecular Biology, 2011, 860, 85-99.	0.9	15
104	Metabolomic Profiling of Natural Volatiles. Methods in Molecular Biology, 2007, 358, 39-53.	0.9	14
105	Petioles as the tissue source for isolation and culture of Beta vulgaris and B. maritima protoplasts. Plant Science, 1993, 95, 89-97.	3.6	12
106	The Flavonoid Pathway in Tomato Seedlings: Transcript Abundance and the Modeling of Metabolite Dynamics. PLoS ONE, 2013, 8, e68960.	2.5	12
107	The effect of partial replacement of maltodextrin with vegetable fibres in spray-dried white asparagus powder on its physical and aroma properties. Food Chemistry, 2021, 356, 129567.	8.2	12
108	Metabolomics Reveals Heterogeneity in the Chemical Composition of Green and White Spears of Asparagus (A. officinalis). Metabolites, 2021, 11, 708.	2.9	12

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109	High yields of cytoplasts from protoplasts of Lolium perenne and Beta vulgaris using gradient centrifugation. Plant Cell, Tissue and Organ Culture, 1992, 31, 223-232.	2.3	11
110	Plant Cell Culture Initiation: Practical Tips. Molecular Biotechnology, 2000, 16, 161-174.	2.4	10
111	Use of New Generation Single Nucleotide Polymorphism Genotyping for Rapid Development of Nearâ€isogenic Lines in Rice. Crop Science, 2011, 51, 2067-2073.	1.8	10
112	Laser Ablation Electrospray Ionization-Mass Spectrometry Imaging (LAESI-MS) for Spatially Resolved Plant Metabolomics. Methods in Molecular Biology, 2018, 1778, 253-267.	0.9	10
113	Practical Applications of Metabolomics in Plant Biology. Methods in Molecular Biology, 2011, 860, 1-10.	0.9	10
114	Automated assembly of species metabolomes through data submission into a public repository. GigaScience, 2017, 6, 1-4.	6.4	9
115	The use of an automated cell tracking system to identify specific cell types competent for regeneration and transformation. In Vitro Cellular and Developmental Biology - Plant, 1998, 34, 81-86.	2.1	8
116	Metabolomics across the globe. Metabolomics, 2013, 9, 258-264.	3.0	8
117	A Multidisciplinary Phenotyping and Genotyping Analysis of a Mapping Population Enables Quality to Be Combined with Yield in Rice. Frontiers in Molecular Biosciences, 2017, 4, 32.	3.5	8
118	Stir bar sorptive extraction of aroma compounds in soy sauce: Revealing the chemical diversity. Food Research International, 2021, 144, 110348.	6.2	8
119	Limitations to product yield in rapidly growing cultures of <i>Capsicum frutescens</i>. Biochemical Society Transactions, 1988, 16, 66-67.	3.4	6
120	Effect of gamma-irradiation on protoplast viability and chloroplast DNA damage in Lycopersicon peruvianum with respect to donor-recipient protoplast fusion. Environmental and Experimental Botany, 1992, 32, 255-264.	4.2	6
121	Correlation of Rutin Accumulation with 3-O-Glucosyl Transferase and Phenylalanine Ammonia-lyase Activities During the Ripening of Tomato Fruit. Plant Foods for Human Nutrition, 2012, 67, 371-376.	3.2	6
122	Metabolomics meets functional assays: coupling LCâ€“MS and microfluidic cell-based receptor-ligand analyses. Metabolomics, 2016, 12, 115.	3.0	6
123	The effect ofn-propyl gallate on the formation of ethylene during protoplast isolation in sugarbeet (Beta vulgarisL.). Journal of Experimental Botany, 1994, 45, 1899-1901.	4.8	5
124	Metabolomics for the Assessment of Functional Diversity and Quality Traits in Plants. , 2005, , 31-44.		5
125	The Impact of the Product Generation Life Cycle on Knowledge Valorization at the Public Private Research Partnership, the Centre for BioSystems Genomics. Njas - Wageningen Journal of Life Sciences, 2013, 67, 1-10.	7.7	5
126	Metabolomics and the move towards biology. Metabolomics, 2011, 7, 454-456.	3.0	4

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127	Metabolomic Profiling of Natural Volatiles: Headspace Trapping: GC-MS. , 0, , 39-54.		4
128	Systematic selection of competing metabolomics methods in a metabolite-sensory relationship study. Metabolomics, 2021, 17, 77.	3.0	3
129	Metabolic Pathway Inference from Time Series Data: A Non Iterative Approach. Lecture Notes in Computer Science, 2011, , 97-108.	1.3	3
130	The initiation and maintenance of callus cultures of carrot and tobacco. , 1991, , 25-43.		3
131	Developments in plant protoplast research. Trends in Biotechnology, 1988, 6, 110-112.	9.3	2
132	Towards prevention of allergy through an integrated multidisciplinary approach. Njas - Wageningen Journal of Life Sciences, 2005, 53, 35-47.	7.7	2
133	Calcium Imaging of GPCR Activation Using Arrays of Reverse Transfected HEK293 Cells in a Microfluidic System. Sensors, 2018, 18, 602.	3.8	2
134	The Metabolomics Societyâ€"Current State of the Membership and Future Directions. Metabolites, 2019, 9, 89.	2.9	2
135	Natural diversity in health related phytochemicals in Turkish tomatoes. Journal of Berry Research, 2021, 11, 279-299.	1.4	2
136	Metabolomics continues to flourish: highlights from the 2014 Metabolomics Society Conference. Metabolomics, 2014, 10, 772-774.	3.0	1
137	Biotechnological applications for stomatal guard cells. Journal of Experimental Botany, 1998, 49, 369-375.	4.8	1
138	New web forum for Metabolomics Societyâ€™s interest groups. Metabolomics, 2012, 8, 367-367.	3.0	0
139	2014 Honorary fellows of the Metabolomics Society. Metabolomics, 2014, 10, 537-538.	3.0	0
140	The Effect of Calcium Buffering and Calcium Sensor Type on the Sensitivity of an Array-Based Bitter Receptor Screening Assay. Chemical Senses, 2019, 44, 497-505.	2.0	0
141	Genetic Engineering of Beet and the Concept of the Plant as a Factory. , 2002, , .		0
142	Parameter estimation in tree graph metabolic networks. PeerJ, 2016, 4, e2417.	2.0	0