Natalia Dudareva

List of Publications by Year in Descending Order

143 papers	13,587 citations	56 h-index	116 g-index
153 ext. papers	16,010 ext. citations	8.8 avg, IF	6.64 L-index

#	Paper	IF	Citations
143	A peroxisomal heterodimeric enzyme is involved in benzaldehyde synthesis in plants.. *Nature Communications*, **2022**, 13, 1352	17.4	3
142	Transcriptional upregulation of host-specific terpene metabolism in aphid-induced galls of Pistacia palaestina. *Journal of Experimental Botany*, **2021**,	7	1
141	Overcoming Bottlenecks for Metabolic Engineering of Sesquiterpene Production in Tomato Fruits. *Frontiers in Plant Science*, **2021**, 12, 691754	6.2	1
140	Silent constraints: the hidden challenges faced in plant metabolic engineering. *Current Opinion in Biotechnology*, **2021**, 69, 112-117	11.4	4
139	Cuticle thickness affects dynamics of volatile emission from petunia flowers. *Nature Chemical Biology*, **2021**, 17, 138-145	11.7	16
138	Dynamic histone acetylation in floral volatile synthesis and emission in petunia flowers. *Journal of Experimental Botany*, **2021**, 72, 3704-3722	7	4
137	Combining biotechnology and evolution for understanding the mechanisms of pollinator attraction. *Current Opinion in Biotechnology*, **2021**, 70, 213-219	11.4	1
136	Adaptive mechanisms of plant specialized metabolism connecting chemistry to function. *Nature Chemical Biology*, **2021**, 17, 1037-1045	11.7	13
135	Overexpression of arogenate dehydratase reveals an upstream point of metabolic control in phenylalanine biosynthesis. *Plant Journal*, **2021**, 108, 737-751	6.9	4
134	Identification of a wild carrot as carrot psylla (Bactericera trigonica) attractant and host plant chemistry. *Plant Science*, **2021**, 311, 111011	5.3	0
133	The biosynthesis of thymol, carvacrol, and thymohydroquinone in Lamiaceae proceeds via cytochrome P450s and a short-chain dehydrogenase.. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	7
132	The evolutionary origins of the cat attractant nepetalactone in catnip. *Science Advances*, **2020**, 6, eaba0721	14.3	22
131	Aromatic Amino Acids: A Complex Network Ripe for Future Exploration. *Trends in Plant Science*, **2020**, 25, 670-681	13.1	19
130	Modulation of auxin formation by the cytosolic phenylalanine biosynthetic pathway. *Nature Chemical Biology*, **2020**, 16, 850-856	11.7	10
129	Prenyltransferases catalyzing geranyldiphosphate formation in tomato fruit. *Plant Science*, **2020**, 296, 110504	5.3	3
128	Floral Scent Metabolic Pathways and Their Regulation **2020**, 147-164		1
127	Metabolic Engineering of Plant Volatiles **2020**, 379-403		2

126	Emission and Perception of Plant Volatiles **2020**, 251-267		0
125	Genome sequencing of four culinary herbs reveals terpenoid genes underlying chemodiversity in the Nepetoideae. *DNA Research*, **2020**, 27,	4.5	6
124	A chromosomal-scale genome assembly of Tectona grandis reveals the importance of tandem gene duplication and enables discovery of genes in natural product biosynthetic pathways. *GigaScience*, **2019**, 8,	7.6	25
123	Natural fumigation as a mechanism for volatile transport between flower organs. *Nature Chemical Biology*, **2019**, 15, 583-588	11.7	32
122	Retracing the molecular basis and evolutionary history of the loss of benzaldehyde emission in the genus Capsella. *New Phytologist*, **2019**, 224, 1349-1360	9.8	5
121	A Promiscuous CYP706A3 Reduces Terpene Volatile Emission from Arabidopsis Flowers, Affecting Florivores and the Floral Microbiome. *Plant Cell*, **2019**, 31, 2947-2972	11.6	16
120	Completion of the cytosolic post-chorismate phenylalanine biosynthetic pathway in plants. *Nature Communications*, **2019**, 10, 15	17.4	57
119	Biosynthesis of methyleugenol and methylisoeugenol in Daucus carota leaves: Characterization of eugenol/isoeugenol synthase and O-Methyltransferase. *Phytochemistry*, **2019**, 159, 179-189	4	9
118	A peroxisomal thioesterase plays auxiliary roles in plant □oxidative benzoic acid metabolism. *Plant Journal*, **2018**, 93, 905-916	6.9	19
117	A C isotope labeling method for the measurement of lignin metabolic flux in Arabidopsis stems. *Plant Methods*, **2018**, 14, 51	5.8	16
116	Dynamic modeling of subcellular phenylpropanoid metabolism in Arabidopsis lignifying cells. *Metabolic Engineering*, **2018**, 49, 36-46	9.7	9
115	Contribution of isopentenyl phosphate to plant terpenoid metabolism. *Nature Plants*, **2018**, 4, 721-729	11.5	62
114	Floral Scent: Biosynthesis, Regulation and Genetic Modifications **2018**, 240-257		3
113	Phylogenomic Mining of the Mints Reveals Multiple Mechanisms Contributing to the Evolution of Chemical Diversity in Lamiaceae. *Molecular Plant*, **2018**, 11, 1084-1096	14.4	48
112	Differences in Monoterpene Biosynthesis and Accumulation in Pistacia palaestina Leaves and Aphid-Induced Galls. *Journal of Chemical Ecology*, **2017**, 43, 143-152	2.7	15
111	Targeted Metabolomics of the Phenylpropanoid Pathway in Arabidopsis thaliana using Reversed Phase Liquid Chromatography Coupled with Tandem Mass Spectrometry. *Phytochemical Analysis*, **2017**, 28, 267-276	3.4	15
110	Carnivore Attractant or Plant Elicitor? Multifunctional Roles of Methyl Salicylate Lures in Tomato Defense. *Journal of Chemical Ecology*, **2017**, 43, 573-585	2.7	12
109	A recruiting protein of geranylgeranyl diphosphate synthase controls metabolic flux toward chlorophyll biosynthesis in rice. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 6866-6871	11.5	56

108	Plant Volatiles: Going In but not Out of Trichome Cavities. *Trends in Plant Science*, **2017**, 22, 930-938	13.1	64
107	Multifaceted plant responses to circumvent Phe hyperaccumulation by downregulation of flux through the shikimate pathway and by vacuolar Phe sequestration. *Plant Journal*, **2017**, 92, 939-950	6.9	13
106	Emission of volatile organic compounds from petunia flowers is facilitated by an ABC transporter. *Science*, **2017**, 356, 1386-1388	33.3	126
105	Tomato aroma: biochemistry and biotechnology **2016**, 243-263		
104	Insight into the evolution of the Solanaceae from the parental genomes of Petunia hybrida. *Nature Plants*, **2016**, 2, 16074	11.5	198
103	CCoAOMT Down-Regulation Activates Anthocyanin Biosynthesis in Petunia. *Plant Physiology*, **2016**, 170, 717-31	6.6	30
102	Phenotypic Space and Variation of Floral Scent Profiles during Late Flower Development in. *Frontiers in Plant Science*, **2016**, 7, 1903	6.2	13
101	Tomato Fruits-A Platform for Metabolic Engineering of Terpenes. *Methods in Enzymology*, **2016**, 576, 333-59	1.7	3
100	Orthologs of the archaeal isopentenyl phosphate kinase regulate terpenoid production in plants. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 10050-5	11.5	49
99	Rethinking how volatiles are released from plant cells. *Trends in Plant Science*, **2015**, 20, 545-50	13.1	108
98	Genetic manipulation of lignocellulosic biomass for bioenergy. *Current Opinion in Chemical Biology*, **2015**, 29, 32-9	9.7	46
97	Identification of a plastidial phenylalanine exporter that influences flux distribution through the phenylalanine biosynthetic network. *Nature Communications*, **2015**, 6, 8142	17.4	52
96	Petunia hybrida floral scent production is negatively affected by high-temperature growth conditions. *Plant, Cell and Environment*, **2015**, 38, 1333-46	8.4	32
95	A familiar ring to it: biosynthesis of plant benzoic acids. *Molecular Plant*, **2015**, 8, 83-97	14.4	211
94	Aromatic Amino Acid Network: Biosynthesis, Regulation and Transport. *FASEB Journal*, **2015**, 29, 103.2	0.9	0
93	Floral volatiles: from biosynthesis to function. *Plant, Cell and Environment*, **2014**, 37, 1936-49	8.4	215
92	Metabolic engineering of monoterpene biosynthesis in tomato fruits via introduction of the non-canonical substrate neryl diphosphate. *Metabolic Engineering*, **2014**, 24, 107-16	9.7	31
91	A Familiar Ring to It: Biosynthesis of Plant Benzoic Acids. *Molecular Plant*, **2014**,	14.4	1

90	Structural studies of cinnamoyl-CoA reductase and cinnamyl-alcohol dehydrogenase, key enzymes of monolignol biosynthesis. *Plant Cell*, **2014**, 26, 3709-27	11.6	48
89	Quantification of plant volatiles. *Methods in Molecular Biology*, **2014**, 1083, 41-53	1.4	3
88	The monolignol pathway contributes to the biosynthesis of volatile phenylpropenes in flowers. *New Phytologist*, **2014**, 204, 661-670	9.8	29
87	The Origin and Biosynthesis of the Benzenoid Moiety of Ubiquinone (Coenzyme Q) in Arabidopsis. *Plant Cell*, **2014**, 26, 1938-1948	11.6	63
86	Phylobiochemical characterization of class-Ib aspartate/prephenate aminotransferases reveals evolution of the plant arogenate phenylalanine pathway. *Plant Cell*, **2014**, 26, 3101-14	11.6	20
85	An alternative pathway contributes to phenylalanine biosynthesis in plants via a cytosolic tyrosine:phenylpyruvate aminotransferase. *Nature Communications*, **2013**, 4, 2833	17.4	121
84	Biosynthesis, function and metabolic engineering of plant volatile organic compounds. *New Phytologist*, **2013**, 198, 16-32	9.8	697
83	The challenges of cellular compartmentalization in plant metabolic engineering. *Current Opinion in Biotechnology*, **2013**, 24, 239-46	11.4	69
82	Functional identification of valerena-1,10-diene synthase, a terpene synthase catalyzing a unique chemical cascade in the biosynthesis of biologically active sesquiterpenes in Valeriana officinalis. *Journal of Biological Chemistry*, **2013**, 288, 3163-73	5.4	34
81	Cytosolic monoterpene biosynthesis is supported by plastid-generated geranyl diphosphate substrate in transgenic tomato fruits. *Plant Journal*, **2013**, 75, 351-63	6.9	81
80	Benzoylation and sinapoylation of glucosinolate R-groups in Arabidopsis. *Plant Journal*, **2012**, 72, 411-22	6.9	66
79	Contribution of CoA ligases to benzenoid biosynthesis in petunia flowers. *Plant Cell*, **2012**, 24, 2015-30	11.6	105
78	Completion of the core β-oxidative pathway of benzoic acid biosynthesis in plants. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 16383-8	11.5	123
77	Involvement of Compartmentalization in Monoterpene and Sesquiterpene Biosynthesis in Plants **2012**, 155-169		6
76	Developmental changes in the metabolic network of snapdragon flowers. *PLoS ONE*, **2012**, 7, e40381	3.7	56
75	The shikimate pathway and aromatic amino Acid biosynthesis in plants. *Annual Review of Plant Biology*, **2012**, 63, 73-105	30.7	696
74	Profiling hydroxycinnamoyl-coenzyme A thioesters: unlocking the back door of phenylpropanoid metabolism. *Analytical Biochemistry*, **2012**, 420, 182-4	3.1	7
73	A survey of oxidative paracatalytic reactions catalyzed by enzymes that generate carbanionic intermediates: implications for ROS production, cancer etiology, and neurodegenerative diseases. *Advances in Enzymology and Related Areas of Molecular Biology*, **2011**, 77, 307-60		23

72	Role of aromatic aldehyde synthase in wounding/herbivory response and flower scent production in different Arabidopsis ecotypes. *Plant Journal*, **2011**, 66, 591-602	6.9	45
71	Prephenate aminotransferase directs plant phenylalanine biosynthesis via arogenate. *Nature Chemical Biology*, **2011**, 7, 19-21	11.7	114
70	A kinetic model describes metabolic response to perturbations and distribution of flux control in the benzenoid network of Petunia hybrida. *Plant Journal*, **2010**, 62, 64-76	6.9	39
69	RNAi suppression of Arogenate Dehydratase1 reveals that phenylalanine is synthesized predominantly via the arogenate pathway in petunia petals. *Plant Cell*, **2010**, 22, 832-49	11.6	121
68	Biogenesis of Floral Scents **2010**, 31-54		6
67	Chapter 10 The Role of the Methyl-Erythritol-Phosphate (MEP)Pathway in Rhythmic Emission of Volatiles. *Advances in Photosynthesis and Respiration*, **2010**, 139-154	1.7	10
66	The small subunit of snapdragon geranyl diphosphate synthase modifies the chain length specificity of tobacco geranylgeranyl diphosphate synthase in planta. *Plant Cell*, **2009**, 21, 4002-17	11.6	72
65	Two terpene synthases are responsible for the major sesquiterpenes emitted from the flowers of kiwifruit (Actinidia deliciosa). *Journal of Experimental Botany*, **2009**, 60, 3203-19	7	101
64	An important role of a BAHD acyl transferase-like protein in plant innate immunity. *Plant Journal*, **2009**, 57, 1040-53	6.9	48
63	The lack of floral synthesis and emission of isoeugenol in Petunia axillaris subsp. parodii is due to a mutation in the isoeugenol synthase gene. *Plant Journal*, **2009**, 58, 961-9	6.9	29
62	Involvement of snapdragon benzaldehyde dehydrogenase in benzoic acid biosynthesis. *Plant Journal*, **2009**, 59, 256-65	6.9	76
61	Benzenoids Dominate the Fragrance of Petunia Flowers **2009**, 51-69		5
60	Metabolomics of plant volatiles. *Methods in Molecular Biology*, **2009**, 553, 329-43	1.4	25
59	Application of Dynamic Flux Analysis in Plant Metabolic Networks **2009**, 285-305		4
58	Floral Scents and Fruit Aromas Inspired by Nature **2009**, 405-431		19
57	Interlinking showy traits: co-engineering of scent and colour biosynthesis in flowers. *Plant Biotechnology Journal*, **2008**, 6, 403-15	11.6	85
56	The multiple phenylpropene synthases in both Clarkia breweri and Petunia hybrida represent two distinct protein lineages. *Plant Journal*, **2008**, 54, 362-74	6.9	68
55	Two nearly identical terpene synthases catalyze the formation of nerolidol and linalool in snapdragon flowers. *Plant Journal*, **2008**, 55, 224-39	6.9	158

54	Metabolic engineering of plant volatiles. *Current Opinion in Biotechnology*, **2008**, 19, 181-9	11.4	171
53	Aromatic Volatiles and Their Involvement in Plant Defense **2008**, 409-432		15
52	Career Profile: Biochemist and Plant Molecular Biologist. *Journal of Chemical Education*, **2007**, 84, 1564	2.4	
51	The function of terpene natural products in the natural world. *Nature Chemical Biology*, **2007**, 3, 408-14	11.7	1212
50	Characterization of a petunia acetyltransferase involved in the biosynthesis of the floral volatile isoeugenol. *Plant Journal*, **2007**, 49, 265-75	6.9	107
49	Scent engineering: toward the goal of controlling how flowers smell. *Trends in Biotechnology*, **2007**, 25, 105-10	15.1	89
48	The floral volatile, methyl benzoate, from snapdragon (Antirrhinum majus) triggers phytotoxic effects in Arabidopsis thaliana. *Planta*, **2007**, 226, 1-10	4.7	31
47	Evolution of Cinnamate/p-coumarate carboxyl methyltransferases and their role in the biosynthesis of methylcinnamate. *Plant Cell*, **2007**, 19, 3212-29	11.6	52
46	Metabolie Engineering of Floral Scent of Ornamentals. *Journal of Crop Improvement*, **2006**, 18, 325-346	1.4	4
45	Eugenol and isoeugenol, characteristic aromatic constituents of spices, are biosynthesized via reduction of a coniferyl alcohol ester. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 10128-33	11.5	267
44	Plant phenylacetaldehyde synthase is a bifunctional homotetrameric enzyme that catalyzes phenylalanine decarboxylation and oxidation. *Journal of Biological Chemistry*, **2006**, 281, 23357-66	5.4	211
43	Reduction of benzenoid synthesis in petunia flowers reveals multiple pathways to benzoic acid and enhancement in auxin transport. *Plant Cell*, **2006**, 18, 3458-75	11.6	132
42	Synthesis of the food flavoring methyl benzoate by genetically engineered Saccharomyces cerevisiae. *Journal of Biotechnology*, **2006**, 122, 307-15	3.7	12
41	Biosynthesis of plant volatiles: nature's diversity and ingenuity. *Science*, **2006**, 311, 808-11	33.3	609
40	Developmental Regulation of Phenylpropanoid Biosynthesis in Leaves and Glandular Trichomes of Basil (Ocimum basilicum L.). *International Journal of Plant Sciences*, **2006**, 167, 447-454	2.6	16
39	Plant Volatiles: Recent Advances and Future Perspectives. *Critical Reviews in Plant Sciences*, **2006**, 25, 417-440	5.6	788
38	Generation of phenylpropanoid pathway-derived volatiles in transgenic plants: rose alcohol acetyltransferase produces phenylethyl acetate and benzyl acetate in petunia flowers. *Plant Molecular Biology*, **2006**, 60, 555-63	4.6	81
37	Floral Scent Metabolic Pathways **2006**, 55-78		3

36	Floral benzenoid carboxyl methyltransferases: from in vitro to in planta function. *Phytochemistry*, **2005**, 66, 1211-30	4	99
35	Practical applications of research into the regulation of plant volatile emission. *Current Opinion in Plant Biology*, **2005**, 8, 113-8	9.9	50
34	Intensity and the ratios of compounds in the scent of snapdragon flowers affect scent discrimination by honeybees (Apis mellifera). *Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology*, **2005**, 191, 105-14	2.3	103
33	The nonmevalonate pathway supports both monoterpene and sesquiterpene formation in snapdragon flowers. *Proceedings of the National Academy of Sciences of the United States of America* , **2005**, 102, 933-8	11.5	373
32	Understanding in vivo benzenoid metabolism in petunia petal tissue. *Plant Physiology*, **2004**, 135, 1993-2011	6.6	328
31	Biochemistry of plant volatiles. *Plant Physiology*, **2004**, 135, 1893-902	6.6	710
30	Formation of monoterpenes in Antirrhinum majus and Clarkia breweri flowers involves heterodimeric geranyl diphosphate synthases. *Plant Cell*, **2004**, 16, 977-92	11.6	135
29	Floral Scent **2004**, 456-459		
28	(E)-beta-ocimene and myrcene synthase genes of floral scent biosynthesis in snapdragon: function and expression of three terpene synthase genes of a new terpene synthase subfamily. *Plant Cell*, **2003**, 15, 1227-41	11.6	339
27	Cuticle characteristics and volatile emissions of petals in Antirrhinum majus. *Physiologia Plantarum*, **2003**, 117, 435-443	4.6	56
26	Regulation of methylbenzoate emission after pollination in snapdragon and petunia flowers. *Plant Cell*, **2003**, 15, 2992-3006	11.6	185
25	Functional Genomics to Isolate Genes Involved in Fragrance Production for Genetic Engineering of Scent in Flowers **2003**, 329-332		2
24	Novel S-adenosyl-L-methionine:salicylic acid carboxyl methyltransferase, an enzyme responsible for biosynthesis of methyl salicylate and methyl benzoate, is not involved in floral scent production in snapdragon flowers. *Archives of Biochemistry and Biophysics*, **2002**, 406, 261-70	4.1	58
23	Cellular and subcellular localization of S-adenosyl-L-methionine:benzoic acid carboxyl methyltransferase, the enzyme responsible for biosynthesis of the volatile ester methylbenzoate in snapdragon flowers. *Plant Physiology*, **2001**, 126, 956-64	6.6	116
22	An investigation of the storage and biosynthesis of phenylpropenes in sweet basil. *Plant Physiology*, **2001**, 125, 539-55	6.6	374
21	Regulation of circadian methyl benzoate emission in diurnally and nocturnally emitting plants. *Plant Cell*, **2001**, 13, 2333-47	11.6	190
20	Regulation of Circadian Methyl Benzoate Emission in Diurnally and Nocturnally Emitting Plants. *Plant Cell*, **2001**, 13, 2333	11.6	4
19	Regulation of Circadian Methyl Benzoate Emission in Diurnally and Nocturnally Emitting Plants. *Plant Cell*, **2001**, 13, 2333-2347	11.6	121

18	Developmental regulation of methyl benzoate biosynthesis and emission in snapdragon flowers. *Plant Cell*, **2000**, 12, 949-61	11.6	242
17	Purification and characterization of S-adenosyl-L-methionine:benzoic acid carboxyl methyltransferase, the enzyme responsible for biosynthesis of the volatile ester methyl benzoate in flowers of Antirrhinum majus. *Archives of Biochemistry and Biophysics*, **2000**, 382, 145-51	4.1	76
16	Biochemical and molecular genetic aspects of floral scents. *Plant Physiology*, **2000**, 122, 627-33	6.6	346
15	Characterization of benzylalcohol acetyltransferases in scented and non-scented Clarkia species. *Plant and Cell Physiology*, **1999**, 40, 916-23	4.9	25
14	Biosynthesis of Scent and Flavor Compounds. *Current Plant Science and Biotechnology in Agriculture*, **1999**, 601-604		1
13	Acetyl-CoA:benzylalcohol acetyltransferase--an enzyme involved in floral scent production in Clarkia breweri. *Plant Journal*, **1998**, 14, 297-304	6.9	173
12	Floral scent production in Clarkia breweri. III. Enzymatic synthesis and emission of benzenoid esters. *Plant Physiology*, **1998**, 116, 599-604	6.6	78
11	Structure and evolution of linalool synthase. *Molecular Biology and Evolution*, **1998**, 15, 1491-8	8.3	100
10	Floral scent production in Clarkia breweri (Onagraceae). II. Localization and developmental modulation of the enzyme S-adenosyl-L-methionine:(iso)eugenol O-methyltransferase and phenylpropanoid emission. *Plant Physiology*, **1997**, 114, 213-21	6.6	127
9	Evolution of Floral Scent in Clarkia: Novel Patterns of S-Linalool Synthase Gene Expression in the C. breweri Flower. *Plant Cell*, **1996**, 8, 1137	11.6	22
8	A flower-specific gene family whose expression is regulated temporally and spatially during flower development in sunflower. *Plant Science*, **1996**, 120, 161-173	5.3	5
7	Evolution of floral scent in Clarkia: novel patterns of S-linalool synthase gene expression in the C. breweri flower. *Plant Cell*, **1996**, 8, 1137-48	11.6	300
6	A pollen-specific gene from sunflower encodes a member of the leucine-rich-repeat protein superfamily. *Plant Science*, **1995**, 111, 81-93	5.3	7
5	Nucleotide sequence of a pollen-specific cDNA from Helianthus annuus L. encoding a highly basic protein. *Plant Physiology*, **1994**, 106, 403-4	6.6	11
4	Structural organization and transcription of plant mitochondrial and chloroplast genomes. *Electron Microscopy Reviews*, **1991**, 4, 221-47		6
3	The chloroplast genome of Beta vulgaris L.: Structural organization and transcriptional activity. *Plant Science*, **1989**, 62, 93-103	5.3	4
2	Structure of the mitochondrial genome of Beta vulgaris L. *Theoretical and Applied Genetics*, **1988**, 76, 753-9	6	21
1	Floral Scent: Biosynthesis, Regulation and Genetic Modifications240-257		2