# Natalia Dudareva

#### List of Publications by Citations

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

#	Paper	IF	Citations
143	The function of terpene natural products in the natural world. <i>Nature Chemical Biology</i> , <b>2007</b> , 3, 408-14	11.7	1212
142	Plant Volatiles: Recent Advances and Future Perspectives. <i>Critical Reviews in Plant Sciences</i> , <b>2006</b> , 25, 417-440	5.6	788
141	Biochemistry of plant volatiles. <i>Plant Physiology</i> , <b>2004</b> , 135, 1893-902	6.6	710
140	Biosynthesis, function and metabolic engineering of plant volatile organic compounds. <i>New Phytologist</i> , <b>2013</b> , 198, 16-32	9.8	697
139	The shikimate pathway and aromatic amino Acid biosynthesis in plants. <i>Annual Review of Plant Biology</i> , <b>2012</b> , 63, 73-105	30.7	696
138	Biosynthesis of plant volatiles: nature diversity and ingenuity. Science, 2006, 311, 808-11	33.3	609
137	An investigation of the storage and biosynthesis of phenylpropenes in sweet basil. <i>Plant Physiology</i> , <b>2001</b> , 125, 539-55	6.6	374
136	The nonmevalonate pathway supports both monoterpene and sesquiterpene formation in snapdragon flowers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 933-8	11.5	373
135	Biochemical and molecular genetic aspects of floral scents. <i>Plant Physiology</i> , <b>2000</b> , 122, 627-33	6.6	346
134	(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. <i>Plant Cell</i> , <b>2003</b> , 15, 1227-41	11.6	339
133	Understanding in vivo benzenoid metabolism in petunia petal tissue. <i>Plant Physiology</i> , <b>2004</b> , 135, 1993-	2 <b>6</b> .61	328
132	Evolution of floral scent in Clarkia: novel patterns of S-linalool synthase gene expression in the C. breweri flower. <i>Plant Cell</i> , <b>1996</b> , 8, 1137-48	11.6	300
131	Eugenol and isoeugenol, characteristic aromatic constituents of spices, are biosynthesized via reduction of a coniferyl alcohol ester. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 10128-33	11.5	267
130	Developmental regulation of methyl benzoate biosynthesis and emission in snapdragon flowers. <i>Plant Cell</i> , <b>2000</b> , 12, 949-61	11.6	242
129	Floral volatiles: from biosynthesis to function. <i>Plant, Cell and Environment</i> , <b>2014</b> , 37, 1936-49	8.4	215
128	A familiar ring to it: biosynthesis of plant benzoic acids. <i>Molecular Plant</i> , <b>2015</b> , 8, 83-97	14.4	211
127	Plant phenylacetaldehyde synthase is a bifunctional homotetrameric enzyme that catalyzes phenylalanine decarboxylation and oxidation. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 23357-66	5.4	211

## (2007-2016)

126	Insight into the evolution of the Solanaceae from the parental genomes of Petunia hybrida. <i>Nature Plants</i> , <b>2016</b> , 2, 16074	11.5	198
125	Regulation of circadian methyl benzoate emission in diurnally and nocturnally emitting plants. <i>Plant Cell</i> , <b>2001</b> , 13, 2333-47	11.6	190
124	Regulation of methylbenzoate emission after pollination in snapdragon and petunia flowers. <i>Plant Cell</i> , <b>2003</b> , 15, 2992-3006	11.6	185
123	Acetyl-CoA:benzylalcohol acetyltransferasean enzyme involved in floral scent production in Clarkia breweri. <i>Plant Journal</i> , <b>1998</b> , 14, 297-304	6.9	173
122	Metabolic engineering of plant volatiles. Current Opinion in Biotechnology, 2008, 19, 181-9	11.4	171
121	Two nearly identical terpene synthases catalyze the formation of nerolidol and linalool in snapdragon flowers. <i>Plant Journal</i> , <b>2008</b> , 55, 224-39	6.9	158
120	Formation of monoterpenes in Antirrhinum majus and Clarkia breweri flowers involves heterodimeric geranyl diphosphate synthases. <i>Plant Cell</i> , <b>2004</b> , 16, 977-92	11.6	135
119	Reduction of benzenoid synthesis in petunia flowers reveals multiple pathways to benzoic acid and enhancement in auxin transport. <i>Plant Cell</i> , <b>2006</b> , 18, 3458-75	11.6	132
118	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. <i>Plant Physiology</i> , <b>1997</b> , 114, 213-21	6.6	127
117	Emission of volatile organic compounds from petunia flowers is facilitated by an ABC transporter. <i>Science</i> , <b>2017</b> , 356, 1386-1388	33.3	126
116	Completion of the core Ebxidative pathway of benzoic acid biosynthesis in plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 16383-8	11.5	123
115	An alternative pathway contributes to phenylalanine biosynthesis in plants via a cytosolic tyrosine:phenylpyruvate aminotransferase. <i>Nature Communications</i> , <b>2013</b> , 4, 2833	17.4	121
114	RNAi suppression of Arogenate Dehydratase1 reveals that phenylalanine is synthesized predominantly via the arogenate pathway in petunia petals. <i>Plant Cell</i> , <b>2010</b> , 22, 832-49	11.6	121
113	Regulation of Circadian Methyl Benzoate Emission in Diurnally and Nocturnally Emitting Plants. <i>Plant Cell</i> , <b>2001</b> , 13, 2333-2347	11.6	121
112	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. <i>Plant Physiology</i> , <b>2001</b> , 126, 956-64	6.6	116
111	Prephenate aminotransferase directs plant phenylalanine biosynthesis via arogenate. <i>Nature Chemical Biology</i> , <b>2011</b> , 7, 19-21	11.7	114
110	Rethinking how volatiles are released from plant cells. <i>Trends in Plant Science</i> , <b>2015</b> , 20, 545-50	13.1	108
109	Characterization of a petunia acetyltransferase involved in the biosynthesis of the floral volatile isoeugenol. <i>Plant Journal</i> , <b>2007</b> , 49, 265-75	6.9	107

108	Contribution of CoA ligases to benzenoid biosynthesis in petunia flowers. <i>Plant Cell</i> , <b>2012</b> , 24, 2015-30	11.6	105
107	Intensity and the ratios of compounds in the scent of snapdragon flowers affect scent discrimination by honeybees (Apis mellifera). <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , <b>2005</b> , 191, 105-14	2.3	103
106	Two terpene synthases are responsible for the major sesquiterpenes emitted from the flowers of kiwifruit (Actinidia deliciosa). <i>Journal of Experimental Botany</i> , <b>2009</b> , 60, 3203-19	7	101
105	Structure and evolution of linalool synthase. <i>Molecular Biology and Evolution</i> , <b>1998</b> , 15, 1491-8	8.3	100
104	Floral benzenoid carboxyl methyltransferases: from in vitro to in planta function. <i>Phytochemistry</i> , <b>2005</b> , 66, 1211-30	4	99
103	Scent engineering: toward the goal of controlling how flowers smell. <i>Trends in Biotechnology</i> , <b>2007</b> , 25, 105-10	15.1	89
102	Interlinking showy traits: co-engineering of scent and colour biosynthesis in flowers. <i>Plant Biotechnology Journal</i> , <b>2008</b> , 6, 403-15	11.6	85
101	Cytosolic monoterpene biosynthesis is supported by plastid-generated geranyl diphosphate substrate in transgenic tomato fruits. <i>Plant Journal</i> , <b>2013</b> , 75, 351-63	6.9	81
100	Generation of phenylpropanoid pathway-derived volatiles in transgenic plants: rose alcohol acetyltransferase produces phenylethyl acetate and benzyl acetate in petunia flowers. <i>Plant Molecular Biology</i> , <b>2006</b> , 60, 555-63	4.6	81
99	Floral scent production in Clarkia breweri. III. Enzymatic synthesis and emission of benzenoid esters. <i>Plant Physiology</i> , <b>1998</b> , 116, 599-604	6.6	78
98	Involvement of snapdragon benzaldehyde dehydrogenase in benzoic acid biosynthesis. <i>Plant Journal</i> , <b>2009</b> , 59, 256-65	6.9	76
97	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. <i>Archives of Biochemistry and Biophysics</i> , <b>2000</b> , 382, 145-51	4.1	76
96	The small subunit of snapdragon geranyl diphosphate synthase modifies the chain length specificity of tobacco geranylgeranyl diphosphate synthase in planta. <i>Plant Cell</i> , <b>2009</b> , 21, 4002-17	11.6	72
95	The challenges of cellular compartmentalization in plant metabolic engineering. <i>Current Opinion in Biotechnology</i> , <b>2013</b> , 24, 239-46	11.4	69
94	The multiple phenylpropene synthases in both Clarkia breweri and Petunia hybrida represent two distinct protein lineages. <i>Plant Journal</i> , <b>2008</b> , 54, 362-74	6.9	68
93	Benzoylation and sinapoylation of glucosinolate R-groups in Arabidopsis. <i>Plant Journal</i> , <b>2012</b> , 72, 411-2	<b>2</b> 6.9	66
92	Plant Volatiles: Going UnUbut not LOutUpf Trichome Cavities. <i>Trends in Plant Science</i> , <b>2017</b> , 22, 930-938	13.1	64
91	The Origin and Biosynthesis of the Benzenoid Moiety of Ubiquinone (Coenzyme Q) in Arabidopsis. <i>Plant Cell</i> , <b>2014</b> , 26, 1938-1948	11.6	63

90	Contribution of isopentenyl phosphate to plant terpenoid metabolism. <i>Nature Plants</i> , <b>2018</b> , 4, 721-729	11.5	62
89	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. <i>Archives of Biochemistry and Biophysics</i> , <b>2002</b> , 406, 261-70	4.1	58
88	Completion of the cytosolic post-chorismate phenylalanine biosynthetic pathway in plants. <i>Nature Communications</i> , <b>2019</b> , 10, 15	17.4	57
87	A recruiting protein of geranylgeranyl diphosphate synthase controls metabolic flux toward chlorophyll biosynthesis in rice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 6866-6871	11.5	56
86	Developmental changes in the metabolic network of snapdragon flowers. <i>PLoS ONE</i> , <b>2012</b> , 7, e40381	3.7	56
85	Cuticle characteristics and volatile emissions of petals in Antirrhinum majus. <i>Physiologia Plantarum</i> , <b>2003</b> , 117, 435-443	4.6	56
84	Identification of a plastidial phenylalanine exporter that influences flux distribution through the phenylalanine biosynthetic network. <i>Nature Communications</i> , <b>2015</b> , 6, 8142	17.4	52
83	Evolution of Cinnamate/p-coumarate carboxyl methyltransferases and their role in the biosynthesis of methylcinnamate. <i>Plant Cell</i> , <b>2007</b> , 19, 3212-29	11.6	52
82	Practical applications of research into the regulation of plant volatile emission. <i>Current Opinion in Plant Biology</i> , <b>2005</b> , 8, 113-8	9.9	50
81	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
8o	Structural studies of cinnamoyl-CoA reductase and cinnamyl-alcohol dehydrogenase, key enzymes of monolignol biosynthesis. <i>Plant Cell</i> , <b>2014</b> , 26, 3709-27	11.6	48
79	An important role of a BAHD acyl transferase-like protein in plant innate immunity. <i>Plant Journal</i> , <b>2009</b> , 57, 1040-53	6.9	48
78	Phylogenomic Mining of the Mints Reveals Multiple Mechanisms Contributing to the Evolution of Chemical Diversity in Lamiaceae. <i>Molecular Plant</i> , <b>2018</b> , 11, 1084-1096	14.4	48
77	Genetic manipulation of lignocellulosic biomass for bioenergy. <i>Current Opinion in Chemical Biology</i> , <b>2015</b> , 29, 32-9	9.7	46
76	Role of aromatic aldehyde synthase in wounding/herbivory response and flower scent production in different Arabidopsis ecotypes. <i>Plant Journal</i> , <b>2011</b> , 66, 591-602	6.9	45
75	A kinetic model describes metabolic response to perturbations and distribution of flux control in the benzenoid network of Petunia hybrida. <i>Plant Journal</i> , <b>2010</b> , 62, 64-76	6.9	39
74	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
73	Natural fumigation as a mechanism for volatile transport between flower organs. <i>Nature Chemical Biology</i> , <b>2019</b> , 15, 583-588	11.7	32

72	Petunia Ihybrida floral scent production is negatively affected by high-temperature growth conditions. <i>Plant, Cell and Environment</i> , <b>2015</b> , 38, 1333-46	8.4	32
71	Metabolic engineering of monoterpene biosynthesis in tomato fruits via introduction of the non-canonical substrate neryl diphosphate. <i>Metabolic Engineering</i> , <b>2014</b> , 24, 107-16	9.7	31
70	The floral volatile, methyl benzoate, from snapdragon (Antirrhinum majus) triggers phytotoxic effects in Arabidopsis thaliana. <i>Planta</i> , <b>2007</b> , 226, 1-10	4.7	31
69	CCoAOMT Down-Regulation Activates Anthocyanin Biosynthesis in Petunia. <i>Plant Physiology</i> , <b>2016</b> , 170, 717-31	6.6	30
68	The monolignol pathway contributes to the biosynthesis of volatile phenylpropenes in flowers. <i>New Phytologist</i> , <b>2014</b> , 204, 661-670	9.8	29
67	The lack of floral synthesis and emission of isoeugenol in Petunia axillaris subsp. parodii is due to a mutation in the isoeugenol synthase gene. <i>Plant Journal</i> , <b>2009</b> , 58, 961-9	6.9	29
66	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. <i>GigaScience</i> , <b>2019</b> , 8,	7.6	25
65	Metabolomics of plant volatiles. <i>Methods in Molecular Biology</i> , <b>2009</b> , 553, 329-43	1.4	25
64	Characterization of benzylalcohol acetyltransferases in scented and non-scented Clarkia species. <i>Plant and Cell Physiology</i> , <b>1999</b> , 40, 916-23	4.9	25
63	A survey of oxidative paracatalytic reactions catalyzed by enzymes that generate carbanionic intermediates: implications for ROS production, cancer etiology, and neurodegenerative diseases. <i>Advances in Enzymology and Related Areas of Molecular Biology</i> , <b>2011</b> , 77, 307-60		23
62	The evolutionary origins of the cat attractant nepetalactone in catnip. Science Advances, 2020, 6, eaba0	) <b>7<del>2</del>4</b> .3	22
61	Evolution of Floral Scent in Clarkia: Novel Patterns of S-Linalool Synthase Gene Expression in the C. breweri Flower. <i>Plant Cell</i> , <b>1996</b> , 8, 1137	11.6	22
60	Structure of the mitochondrial genome of Beta vulgaris L. <i>Theoretical and Applied Genetics</i> , <b>1988</b> , 76, 753-9	6	21
59	Phylobiochemical characterization of class-Ib aspartate/prephenate aminotransferases reveals evolution of the plant arogenate phenylalanine pathway. <i>Plant Cell</i> , <b>2014</b> , 26, 3101-14	11.6	20
58	Aromatic Amino Acids: A Complex Network Ripe for Future Exploration. <i>Trends in Plant Science</i> , <b>2020</b> , 25, 670-681	13.1	19
57	A peroxisomal thioesterase plays auxiliary roles in plant Ebxidative benzoic acid metabolism. <i>Plant Journal</i> , <b>2018</b> , 93, 905-916	6.9	19
56	Floral Scents and Fruit Aromas Inspired by Nature <b>2009</b> , 405-431		19
55	A C isotope labeling method for the measurement of lignin metabolic flux in Arabidopsis stems. <i>Plant Methods</i> , <b>2018</b> , 14, 51	5.8	16

#### (1995-2019)

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5.3	7
	6.2 11.7 2.7 3.7 6.6 11.7 9.7 4

36	The biosynthesis of thymol, carvacrol, and thymohydroquinone in Lamiaceae proceeds via cytochrome P450s and a short-chain dehydrogenase <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	7
35	Involvement of Compartmentalization in Monoterpene and Sesquiterpene Biosynthesis in Plants <b>2012</b> , 155-169		6
34	Biogenesis of Floral Scents <b>2010</b> , 31-54		6
33	Structural organization and transcription of plant mitochondrial and chloroplast genomes. <i>Electron Microscopy Reviews</i> , <b>1991</b> , 4, 221-47		6
32	Genome sequencing of four culinary herbs reveals terpenoid genes underlying chemodiversity in the Nepetoideae. <i>DNA Research</i> , <b>2020</b> , 27,	4.5	6
31	Retracing the molecular basis and evolutionary history of the loss of benzaldehyde emission in the genus Capsella. <i>New Phytologist</i> , <b>2019</b> , 224, 1349-1360	9.8	5
30	Benzenoids Dominate the Fragrance of Petunia Flowers <b>2009</b> , 51-69		5
29	A flower-specific gene family whose expression is regulated temporally and spatially during flower development in sunflower. <i>Plant Science</i> , <b>1996</b> , 120, 161-173	5.3	5
28	Metabolie Engineering of Floral Scent of Ornamentals. <i>Journal of Crop Improvement</i> , <b>2006</b> , 18, 325-346	1.4	4
27	Regulation of Circadian Methyl Benzoate Emission in Diurnally and Nocturnally Emitting Plants. <i>Plant Cell</i> , <b>2001</b> , 13, 2333	11.6	4
26	The chloroplast genome of Beta vulgaris L.: Structural organization and transcriptional activity. <i>Plant Science</i> , <b>1989</b> , 62, 93-103	5.3	4
25	Silent constraints: the hidden challenges faced in plant metabolic engineering. <i>Current Opinion in Biotechnology</i> , <b>2021</b> , 69, 112-117	11.4	4
24	Dynamic histone acetylation in floral volatile synthesis and emission in petunia flowers. <i>Journal of Experimental Botany</i> , <b>2021</b> , 72, 3704-3722	7	4
23	Overexpression of arogenate dehydratase reveals an upstream point of metabolic control in phenylalanine biosynthesis. <i>Plant Journal</i> , <b>2021</b> , 108, 737-751	6.9	4
22	Application of Dynamic Flux Analysis in Plant Metabolic Networks <b>2009</b> , 285-305		4
21	Prenyltransferases catalyzing geranyldiphosphate formation in tomato fruit. <i>Plant Science</i> , <b>2020</b> , 296, 110504	5.3	3
20	Quantification of plant volatiles. <i>Methods in Molecular Biology</i> , <b>2014</b> , 1083, 41-53	1.4	3
19	Floral Scent Metabolic Pathways <b>2006</b> , 55-78		3

## (2004-2016)

18	Tomato Fruits-A Platform for Metabolic Engineering of Terpenes. <i>Methods in Enzymology</i> , <b>2016</b> , 576, 333-59	1.7	3
17	Floral Scent: Biosynthesis, Regulation and Genetic Modifications <b>2018</b> , 240-257		3
16	A peroxisomal heterodimeric enzyme is involved in benzaldehyde synthesis in plants <i>Nature Communications</i> , <b>2022</b> , 13, 1352	17.4	3
15	Floral Scent: Biosynthesis, Regulation and Genetic Modifications240-257		2
14	Metabolic Engineering of Plant Volatiles <b>2020</b> , 379-403		2
13	Functional Genomics to Isolate Genes Involved in Fragrance Production for Genetic Engineering of Scent in Flowers <b>2003</b> , 329-332		2
12	A Familiar Ring to It: Biosynthesis of Plant Benzoic Acids. Molecular Plant, 2014,	14.4	1
11	Floral Scent Metabolic Pathways and Their Regulation <b>2020</b> , 147-164		1
10	Biosynthesis of Scent and Flavor Compounds. <i>Current Plant Science and Biotechnology in Agriculture</i> , <b>1999</b> , 601-604		1
9	Transcriptional upregulation of host-specific terpene metabolism in aphid-induced galls of Pistacia palaestina. <i>Journal of Experimental Botany</i> , <b>2021</b> ,	7	1
8	Overcoming Bottlenecks for Metabolic Engineering of Sesquiterpene Production in Tomato Fruits. <i>Frontiers in Plant Science</i> , <b>2021</b> , 12, 691754	6.2	1
7	Combining biotechnology and evolution for understanding the mechanisms of pollinator attraction. <i>Current Opinion in Biotechnology</i> , <b>2021</b> , 70, 213-219	11.4	1
6	Emission and Perception of Plant Volatiles <b>2020</b> , 251-267		Ο
5	Aromatic Amino Acid Network: Biosynthesis, Regulation and Transport. <i>FASEB Journal</i> , <b>2015</b> , 29, 103.2	0.9	Ο
4	Identification of a wild carrot as carrot psylla (Bactericera trigonica) attractant and host plant chemistry. <i>Plant Science</i> , <b>2021</b> , 311, 111011	5.3	О
3	Tomato aroma: biochemistry and biotechnology <b>2016</b> , 243-263		
2	Career Profile: Biochemist and Plant Molecular Biologist. <i>Journal of Chemical Education</i> , <b>2007</b> , 84, 1564	2.4	
1	Floral Scent <b>2004</b> , 456-459		