

# Hervé Vaucheret

## List of Publications by Year in descending order

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119  
papers

20,500  
citations

19657

61  
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22832

112  
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123  
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123  
docs citations

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times ranked

12296  
citing authors

#	ARTICLE	IF	CITATIONS
1	A diverse and evolutionarily fluid set of microRNAs in <i>Arabidopsis thaliana</i> . <i>Genes and Development</i> , 2006, 20, 3407-3425.	5.9	1,208
2	Criteria for Annotation of Plant MicroRNAs. <i>Plant Cell</i> , 2008, 20, 3186-3190.	6.6	1,158
3	<i>Arabidopsis</i> SGS2 and SGS3 Genes Are Required for Posttranscriptional Gene Silencing and Natural Virus Resistance. <i>Cell</i> , 2000, 101, 533-542.	28.9	999
4	The action of ARGONAUTE1 in the miRNA pathway and its regulation by the miRNA pathway are crucial for plant development. <i>Genes and Development</i> , 2004, 18, 1187-1197.	5.9	868
5	Endogenous trans-Acting siRNAs Regulate the Accumulation of <i>Arabidopsis</i> mRNAs. <i>Molecular Cell</i> , 2004, 16, 69-79.	9.7	742
6	Functions of microRNAs and related small RNAs in plants. <i>Nature Genetics</i> , 2006, 38, S31-S36.	21.4	738
7	Post-transcriptional small RNA pathways in plants: mechanisms and regulations. <i>Genes and Development</i> , 2006, 20, 759-771.	5.9	658
8	Nuclear processing and export of microRNAs in <i>Arabidopsis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 3691-3696.	7.1	598
9	Fertile Hypomorphic ARGONAUTE ( <i>ago1</i> ) Mutants Impaired in Post-Transcriptional Gene Silencing and Virus Resistance. <i>Plant Cell</i> , 2002, 14, 629-639.	6.6	575
10	Plant ARGONAUTES. <i>Trends in Plant Science</i> , 2008, 13, 350-358.	8.8	565
11	Partially Redundant Functions of <i>Arabidopsis</i> DICER-like Enzymes and a Role for DCL4 in Producing trans-Acting siRNAs. <i>Current Biology</i> , 2005, 15, 1494-1500.	3.9	545
12	miR390, <i>Arabidopsis</i> TAS3 tasiRNAs, and Their AUXIN RESPONSE FACTOR Targets Define an Autoregulatory Network Quantitatively Regulating Lateral Root Growth. <i>Plant Cell</i> , 2010, 22, 1104-1117.	6.6	512
13	The Nuclear dsRNA Binding Protein HYL1 Is Required for MicroRNA Accumulation and Plant Development, but Not Posttranscriptional Transgene Silencing. <i>Current Biology</i> , 2004, 14, 346-351.	3.9	498
14	Transgene-induced gene silencing in plants. <i>Plant Journal</i> , 1998, 16, 651-659.	5.7	433
15	An antagonistic function for <i>Arabidopsis</i> DCL2 in development and a new function for DCL4 in generating viral siRNAs. <i>EMBO Journal</i> , 2006, 25, 3347-3356.	7.8	430
16	DRB4-Dependent TAS3 trans-Acting siRNAs Control Leaf Morphology through AGO7. <i>Current Biology</i> , 2006, 16, 927-932.	3.9	423
17	Novel long non-protein coding RNAs involved in <i>Arabidopsis</i> differentiation and stress responses. <i>Genome Research</i> , 2009, 19, 57-69.	5.5	390
18	Form, Function, and Regulation of ARGONAUTE Proteins. <i>Plant Cell</i> , 2010, 22, 3879-3889.	6.6	369

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19	The 21-Nucleotide, but Not 22-Nucleotide, Viral Secondary Small Interfering RNAs Direct Potent Antiviral Defense by Two Cooperative Argonautes in <i>Arabidopsis thaliana</i> . <i>Plant Cell</i> , 2011, 23, 1625-1638.	6.6	354
20	Auxin and Light Control of Adventitious Rooting in <i>Arabidopsis</i> Require ARGONAUTE1. <i>Plant Cell</i> , 2005, 17, 1343-1359.	6.6	339
21	Transcriptional gene silencing in plants: targets, inducers and regulators. <i>Trends in Genetics</i> , 2001, 17, 29-35.	6.7	335
22	AGO1 Homeostasis Entails Coexpression of MIR168 and AGO1 and Preferential Stabilization of miR168 by AGO1. <i>Molecular Cell</i> , 2006, 22, 129-136.	9.7	330
23	Expression of single copies of a strongly expressed 35S transgene can be silenced post-transcriptionally. <i>Plant Journal</i> , 1996, 9, 787-797.	5.7	290
24	<i>Arabidopsis</i> HEN1. <i>Current Biology</i> , 2003, 13, 843-848.	3.9	276
25	HC-Pro Suppression of Transgene Silencing Eliminates the Small RNAs but Not Transgene Methylation or the Mobile Signal. <i>Plant Cell</i> , 2001, 13, 571-583.	6.6	275
26	<i>Arabidopsis</i> FIERY1, XRN2, and XRN3 Are Endogenous RNA Silencing Suppressors. <i>Plant Cell</i> , 2007, 19, 3451-3461.	6.6	275
27	<i>Arabidopsis</i> Histone Deacetylase HDA6 Is Required for Maintenance of Transcriptional Gene Silencing and Determines Nuclear Organization of rDNA Repeats. <i>Plant Cell</i> , 2004, 16, 1021-1034.	6.6	264
28	Regulation of nitrate and nitrite reductase expression in <i>Nicotiana plumbaginifolia</i> leaves by nitrogen and carbon metabolites. <i>Plant Journal</i> , 1993, 3, 315-324.	5.7	247
29	<i>Arabidopsis</i> Mutants Impaired in Cosuppression. <i>Plant Cell</i> , 1998, 10, 1747-1757.	6.6	242
30	A Branched Pathway for Transgene-Induced RNA Silencing in Plants. <i>Current Biology</i> , 2002, 12, 684-688.	3.9	238
31	RNA Silencing and the Mobile Silencing Signal. <i>Plant Cell</i> , 2002, 14, S289-S301.	6.6	221
32	DNA methylation and chromatin structure affect transcriptional and post-transcriptional transgene silencing in <i>Arabidopsis</i> . <i>Current Biology</i> , 2000, 10, 1591-1594.	3.9	220
33	Infection of Tobacco or <i>Arabidopsis</i> Plants by CMV Counteracts Systemic Post-transcriptional Silencing of Nonviral (Trans) Genes. <i>Virology</i> , 1998, 252, 313-317.	2.4	171
34	The <i>Arabidopsis</i> HOMOLOGUE-DEPENDENT GENE SILENCING1 Gene Codes for an S-Adenosyl-L-Homocysteine Hydrolase Required for DNA Methylation-Dependent Gene Silencing. <i>Plant Cell</i> , 2005, 17, 404-417.	6.6	154
35	Gene silencing in plants: A diversity of pathways. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2013, 1829, 1300-1308.	1.9	140
36	Respective contributions of <i>Arabidopsis</i> DCL2 and DCL4 to RNA silencing. <i>Plant Journal</i> , 2015, 81, 223-232.	5.7	139

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37	MicroRNAs: something important between the genes. <i>Current Opinion in Plant Biology</i> , 2004, 7, 120-125.	7.1	133
38	Geminivirus VIGS of endogenous genes requires SGS2/SDE1 and SGS3 and defines a new branch in the genetic pathway for silencing in plants. <i>Plant Journal</i> , 2004, 38, 1004-1014.	5.7	130
39	Cytoplasmic Arabidopsis AGO7 accumulates in membrane-associated siRNA bodies and is required for ta-siRNA biogenesis. <i>EMBO Journal</i> , 2012, 31, 1704-1713.	7.8	121
40	Lessons on RNA Silencing Mechanisms in Plants from Eukaryotic Argonaute Structures. <i>Plant Cell</i> , 2013, 25, 22-37.	6.6	120
41	Requirement of sense transcription for homology-dependent virus resistance and trans-inactivation. <i>Plant Journal</i> , 1997, 12, 597-603.	5.7	118
42	Cloning of DNA fragments complementary to tobacco nitrate reductase mRNA and encoding epitopes common to the nitrate reductases from higher plants. <i>Molecular Genetics and Genomics</i> , 1987, 209, 552-562.	2.4	115
43	Transgenes are dispensable for the RNA degradation step of cosuppression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 9675-9680.	7.1	111
44	Redundant and Specific Roles of the ARGONAUTE Proteins AGO1 and ZLL in Development and Small RNA-Directed Gene Silencing. <i>PLoS Genetics</i> , 2009, 5, e1000646.	3.5	107
45	In plants, decapping prevents RDR6-dependent production of small interfering RNAs from endogenous mRNAs. <i>Nucleic Acids Research</i> , 2015, 43, 2902-2913.	14.5	107
46	Warm temperatures induce transgenerational epigenetic release of RNA silencing by inhibiting siRNA biogenesis in <i>Arabidopsis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 9171-9176.	7.1	104
47	Unexpected silencing effects from T-DNA tags in Arabidopsis. <i>Trends in Plant Science</i> , 2008, 13, 4-6.	8.8	103
48	ARGONAUTE 1 homeostasis invokes the coordinate action of the microRNA and siRNA pathways. <i>EMBO Reports</i> , 2009, 10, 521-526.	4.5	102
49	Inhibition of tobacco nitrite reductase activity by expression of antisense RNA. <i>Plant Journal</i> , 1992, 2, 559-569.	5.7	101
50	MicroRNA maturation and action—the expanding roles of ARGONAUTES. <i>Current Opinion in Plant Biology</i> , 2008, 11, 560-566.	7.1	100
51	Cytoplasmic and nuclear quality control and turnover of single-stranded RNA modulate post-transcriptional gene silencing in plants. <i>Nucleic Acids Research</i> , 2013, 41, 4699-4708.	14.5	99
52	The RNA Helicases AtMTR4 and HEN2 Target Specific Subsets of Nuclear Transcripts for Degradation by the Nuclear Exosome in <i>Arabidopsis thaliana</i> . <i>PLoS Genetics</i> , 2014, 10, e1004564.	3.5	97
53	Molecular cloning and characterisation of the two homeologous genes coding for nitrate reductase in tobacco. <i>Molecular Genetics and Genomics</i> , 1989, 216, 10-15.	2.4	94
54	Co-suppression of nitrate reductase host genes and transgenes in transgenic tobacco plants. <i>Molecular Genetics and Genomics</i> , 1994, 243, 613-621.	2.4	92

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55	AGO1 Homeostasis Involves Differential Production of 21-nt and 22-nt miR168 Species by MIR168a and MIR168b. PLoS ONE, 2009, 4, e6442.	2.5	88
56	The Conserved RNA Trafficking Proteins HPR1 and TEX1 Are Involved in the Production of Endogenous and Exogenous Small Interfering RNA in <i>Arabidopsis</i> . Plant Cell, 2010, 22, 2697-2709.	6.6	88
57	Arabidopsis RPA2: A Genetic Link among Transcriptional Gene Silencing, DNA Repair, and DNA Replication. Current Biology, 2005, 15, 1919-1925.	3.9	87
58	The viral F-box protein PO induces an ER-derived autophagy degradation pathway for the clearance of membrane-bound AGO1. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22872-22883.	7.1	83
59	Biotechnological uses of RNAi in plants: risk assessment considerations. Trends in Biotechnology, 2015, 33, 145-147.	9.3	82
60	Systemic silencing signal(s). , 2000, 43, 285-293.		81
61	The origin and effect of small RNA signaling in plants. Frontiers in Plant Science, 2012, 3, 179.	3.6	76
62	A Genetic Screen for Impaired Systemic RNAi Highlights the Crucial Role of DICER-LIKE 2. Plant Physiology, 2017, 175, 1424-1437.	4.8	72
63	Cloning and expression of distinct nitrite reductases in tobacco leaves and roots. Molecular Genetics and Genomics, 1993, 236-236, 203-208.	2.4	67
64	A Novel fry1 Allele Reveals the Existence of a Mutant Phenotype Unrelated to 5'→3' Exoribonuclease (XRN) Activities in Arabidopsis thaliana Roots. PLoS ONE, 2011, 6, e16724.	2.5	64
65	AGO1 and AGO2 Act Redundantly in miR408-Mediated Plantacyanin Regulation. PLoS ONE, 2011, 6, e28729.	2.5	62
66	MicroRNA-Dependent Trans-Acting siRNA Production. Science Signaling, 2005, 2005, pe43-pe43.	3.6	61
67	siRNAs compete with miRNAs for methylation by HEN1 in Arabidopsis. Nucleic Acids Research, 2010, 38, 5844-5850.	14.5	59
68	Ingested plant miRNAs regulate gene expression in animals. Cell Research, 2012, 22, 3-5.	12.0	58
69	Interest in and limits to the utilization of reporter genes for the analysis of transcriptional regulation of nitrate reductase. Molecular Genetics and Genomics, 1992, 235, 259-268.	2.4	55
70	Functional complementation of tobacco and Nicotiana plumbaginifolia nitrate reductase deficient mutants by transformation with the wild-type alleles of the tobacco structural genes. Molecular Genetics and Genomics, 1990, 220, 468-474.	2.4	53
71	Molecular and genetic analysis of nitrite reductase co-suppression in transgenic tobacco plants. Molecular Genetics and Genomics, 1995, 248, 311-317.	2.4	53
72	A single transgene locus triggers both transcriptional and post-transcriptional silencing through double-stranded RNA production. Planta, 2007, 225, 365-379.	3.2	49

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73	A neomorphic <i>sgs3</i> allele stabilizing miRNA cleavage products reveals that SGS3 acts as a homodimer. <i>FEBS Journal</i> , 2009, 276, 835-844.	4.7	49
74	Post-transcriptional gene silencing triggered by sense transgenes involves uncapped antisense RNA and differs from silencing intentionally triggered by antisense transgenes. <i>Nucleic Acids Research</i> , 2015, 43, 8464-8475.	14.5	47
75	Sequence homology requirements for transcriptional silencing of 35S transgenes and post-transcriptional silencing of nitrite reductase (trans)genes by the tobacco 271 locus. <i>Plant Molecular Biology</i> , 1996, 32, 1075-1083.	3.9	46
76	The Nuclear Ribonucleoprotein Smd1 Interplays with Splicing, RNA Quality Control, and Posttranscriptional Gene Silencing in Arabidopsis. <i>Plant Cell</i> , 2016, 28, 426-438.	6.6	46
77	Gene Activation and Gene Silencing: Fig. 1.. <i>Plant Physiology</i> , 2001, 125, 145-148.	4.8	44
78	A Suppressor Screen for AGO1 Degradation by the Viral F-Box P0 Protein Uncovers a Role for AGO DUF1785 in siRNA Duplex Unwinding. <i>Plant Cell</i> , 2018, 30, 1353-1374.	6.6	44
79	Double-stranded RNA binding proteins DRB2 and DRB4 have an antagonistic impact on polymerase IV-dependent siRNA levels in <i>Arabidopsis</i> . <i>Rna</i> , 2011, 17, 1502-1510.	3.5	43
80	Mutations in the <i>Arabidopsis</i> H3K4me2/3 Demethylase JMJ14 Suppress Posttranscriptional Gene Silencing by Decreasing Transgene Transcription. <i>Plant Cell</i> , 2012, 24, 3603-3612.	6.6	43
81	DCL2 and RDR6 dependent transitive silencing of <i>SMXL4</i> and <i>SMXL5</i> in Arabidopsis <i>dcl4</i> mutants causes defective phloem transport and carbohydrate overaccumulation. <i>Plant Journal</i> , 2017, 90, 1064-1078.	5.7	43
82	SINE RNA Induces Severe Developmental Defects in Arabidopsis thaliana and Interacts with HYL1 (DRB1), a Key Member of the DCL1 Complex. <i>PLoS Genetics</i> , 2008, 4, e1000096.	3.5	42
83	RST1 and RIPR connect the cytosolic RNA exosome to the Ski complex in Arabidopsis. <i>Nature Communications</i> , 2019, 10, 3871.	12.8	42
84	Second-Site Mutagenesis of a Hypomorphic <i>argonaute1</i> Allele Identifies <i>SUPERKILLER3</i> as an Endogenous Suppressor of Transgene Posttranscriptional Gene Silencing. <i>Plant Physiology</i> , 2015, 169, 1266-1274.	4.8	38
85	Plants Encode a General siRNA Suppressor That Is Induced and Suppressed by Viruses. <i>PLoS Biology</i> , 2015, 13, e1002326.	5.6	37
86	Arabidopsis RNASE THREE LIKE2 Modulates the Expression of Protein-Coding Genes via 24-Nucleotide Small Interfering RNA-Directed DNA Methylation. <i>Plant Cell</i> , 2016, 28, 406-425.	6.6	37
87	Plant viral suppressors of post-transcriptional silencing do not suppress transcriptional silencing. <i>Plant Journal</i> , 2000, 22, 51-59.	5.7	36
88	The miRNA pathway limits AGO1 availability during siRNA-mediated PTGS defense against exogenous RNA. <i>Nucleic Acids Research</i> , 2011, 39, 9339-9344.	14.5	36
89	The Zinc-Finger Protein SOP1 Is Required for a Subset of the Nuclear Exosome Functions in Arabidopsis. <i>PLoS Genetics</i> , 2016, 12, e1005817.	3.5	36
90	Nitrate Reductase mRNA Regulation in Nicotiana plumbaginifolia Nitrate Reductase-Deficient Mutants. <i>Plant Cell</i> , 1989, 1, 1111.	6.6	31

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91	The root-knot nematode effector MIEFF18 interacts with the plant core spliceosomal protein SmD1 required for giant cell formation. <i>New Phytologist</i> , 2021, 229, 3408-3423.	7.3	31
92	RNA polymerase IV and transcriptional silencing. <i>Nature Genetics</i> , 2005, 37, 659-660.	21.4	30
93	RDR2 Partially Antagonizes the Production of RDR6-Dependent siRNA in Sense Transgene-Mediated PTGS. <i>PLoS ONE</i> , 2012, 7, e29785.	2.5	30
94	Requirement of sense transcription for homology-dependent virus resistance and transgene inactivation. <i>Plant Journal</i> , 1997, 12, 597-603.	5.7	25
95	Over-expression of acetolactate synthase confers resistance to valine in transgenic tobacco. <i>Plant Science</i> , 1993, 88, 159-168.	3.6	21
96	RNA Silencing Is Resistant to Low-Temperature in Grapevine. <i>PLoS ONE</i> , 2013, 8, e82652.	2.5	21
97	Arabidopsis Mutants Impaired in Cosuppression. <i>Plant Cell</i> , 1998, 10, 1747.	6.6	20
98	A Transcriptionally Active State Is Required for Post-Transcriptional Silencing (Cosuppression) of Nitrate Reductase Host Genes and Transgenes. <i>Plant Cell</i> , 1997, 9, 1495.	6.6	19
99	Dose-Dependent AGO1-Mediated Inhibition of the miRNA165/166 Pathway Modulates Stem Cell Maintenance in Arabidopsis Shoot Apical Meristem. <i>Plant Communications</i> , 2020, 1, 100002.	7.7	18
100	Post-transcriptional gene silencing mutants. , 2000, 43, 275-284.		17
101	The Arabidopsis F-box protein FBW2 targets AGO1 for degradation to prevent spurious loading of illegitimate small RNA. <i>Cell Reports</i> , 2022, 39, 110671.	6.4	16
102	The siRNA suppressor RTL1 is redox-regulated through glutathionylation of a conserved cysteine in the double-stranded-RNA-binding domain. <i>Nucleic Acids Research</i> , 2017, 45, 11891-11907.	14.5	15
103	Post-transcriptional gene silencing triggers dispensable DNA methylation in gene body in Arabidopsis. <i>Nucleic Acids Research</i> , 2019, 47, 9104-9114.	14.5	15
104	Induction of nitrate reductase host gene expression has a negative effect on the expression of transgenes driven by the nitrate reductase promoter. <i>Plant Science</i> , 1995, 107, 95-104.	3.6	12
105	<i>sgs1</i> : a neomorphic <i>nac52</i> allele impairing post-transcriptional gene silencing through <i>SGS3</i> downregulation. <i>Plant Journal</i> , 2017, 90, 505-519.	5.7	9
106	Expression and sequence requirements for nitrite reductase co-suppression. , 1999, 41, 105-114.		7
107	Are Gene Silencing Mutants Good Tools for Reliable Transgene Expression or Reliable Silencing of Endogenous Genes in Plants?. , 2000, 22, 155-170.		6
108	Gene silencing: Mode of miRNA biogenesis matters. <i>Nature Plants</i> , 2015, 1, 15019.	9.3	5

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109	Can-Seq: a PCR and DNA sequencing strategy for identifying new alleles of known and candidate genes. <i>Plant Methods</i> , 2020, 16, 16.	4.3	5
110	Contrasting epigenetic control of transgenes and endogenous genes promotes post-transcriptional transgene silencing in <i>Arabidopsis</i> . <i>Nature Communications</i> , 2021, 12, 2787.	12.8	5
111	Nitrite reductase silencing as a tool for selecting spontaneous haploid plants. <i>Plant Cell Reports</i> , 1995, 15, 12-16.	5.6	4
112	Title is missing!. <i>Euphytica</i> , 1997, 93, 195-200.	1.2	4
113	Small RNA-Mediated Control of Development in Plants. <i>Signaling and Communication in Plants</i> , 2013, , 177-199.	0.7	4
114	HC-Pro Suppression of Transgene Silencing Eliminates the Small RNAs but Not Transgene Methylation or the Mobile Signal. <i>Plant Cell</i> , 2001, 13, 571.	6.6	2
115	Inhibition of tobacco nitrite reductase activity by expression of antisense RNA. <i>Plant Journal</i> , 1992, 2, 559-569.	5.7	2
116	Systemic silencing signal(s). , 2000, , 165-173.		2
117	Deciphering post-transcriptional Gene Silencing Pathways Through Genetic Screens. , 2011, , 17-46.		1
118	Gene silencing in higher plants and related phenomena in other eucaryotes. <i>Plant Science</i> , 1995, 111, 249-250.	3.6	0
119	Thiol-mediated redox regulation of DICER-LIKE RNaseIII and small RNA metabolism. <i>Free Radical Biology and Medicine</i> , 2021, 177, S61-S62.	2.9	0