Renier van der Hoorn

List of Publications by Year
in descending order

131 papers	10,478 citations	36303 51 h-index	36028 97 g-index
137 all docs	137 docs citations	137 times ranked	9324 citing authors

#	Article	IF	Citations
1	Defended to the Nines: 25 Years of Resistance Gene Cloning Identifies Nine Mechanisms for R Protein Function. Plant Cell, 2018, 30, 285-299.	6.6	647
2	Emerging Concepts in Effector Biology of Plant-Associated Organisms. Molecular Plant-Microbe Interactions, 2009, 22, 115-122.	2.6	631
3	From Guard to Decoy: A New Model for Perception of Plant Pathogen Effectors. Plant Cell, 2008, 20, 2009-2017.	6.6	626
4	Plant Proteases: From Phenotypes to Molecular Mechanisms. Annual Review of Plant Biology, 2008, 59, 191-223.	18.7	472
5	Cladosporium Avr2 Inhibits Tomato Rcr3 Protease Required for Cf-2-Dependent Disease Resistance. Science, 2005, 308, 1783-1786.	12.6	415
6	Agroinfiltration Is a Versatile Tool That Facilitates Comparative Analyses of Avr9/Cf-9-Induced and Avr4/Cf-4-Induced Necrosis. Molecular Plant-Microbe Interactions, 2000, 13, 439-446.	2.6	328
7	<i>Phytophthora infestans</i> effector AVRblb2 prevents secretion of a plant immune protease at the haustorial interface. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20832-20837.	7.1	285
8	A Phytophthora infestans Cystatin-Like Protein Targets a Novel Tomato Papain-Like Apoplastic Protease. Plant Physiology, 2007, 143, 364-377.	4.8	277
9	Apoplastic effectors secreted by two unrelated eukaryotic plant pathogens target the tomato defense protease Rcr3. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1654-1659.	7.1	260
10	Dual disease resistance mediated by the immune receptor Cf-2 in tomato requires a common virulence target of a fungus and a nematode. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10119-10124.	7.1	246
11	The plant proteolytic machinery and its role in defence. Current Opinion in Plant Biology, 2004, 7, 400-407.	7.1	231
12	Fungal Effector Protein AVR2 Targets Diversifying Defense-Related Cys Proteases of Tomato. Plant Cell, 2008, 20, 1169-1183.	6.6	230
13	Autophagy differentially controls plant basal immunity to biotrophic and necrotrophic pathogens. Plant Journal, 2011, 66, 818-830.	5.7	190
14	Effector Specialization in a Lineage of the Irish Potato Famine Pathogen. Science, 2014, 343, 552-555.	12.6	179
15	Post-transcriptional silencing of chalcone synthase in Petunia by inverted transgene repeats. Plant Journal, 1997, 12, 63-82.	5.7	177
16	An Effector-Targeted Protease Contributes to Defense against <i>Phytophthora infestans</i> and Is under Diversifying Selection in Natural Hosts. Plant Physiology, 2010, 154, 1794-1804.	4.8	166
17	Subclassification and Biochemical Analysis of Plant Papain-Like Cysteine Proteases Displays Subfamily-Specific Characteristics Â Â. Plant Physiology, 2012, 158, 1583-1599.	4.8	166
18	Papainâ€like cysteine proteases as hubs in plant immunity. New Phytologist, 2016, 212, 902-907.	7.3	161

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19	Balancing selection favors guarding resistance proteins. Trends in Plant Science, 2002, 7, 67-71.	8.8	154
20	Involvement of cathepsin B in the plant disease resistance hypersensitive response. Plant Journal, 2007, 52, 1-13.	5.7	147
21	A Maize Cystatin Suppresses Host Immunity by Inhibiting Apoplastic Cysteine Proteases. Plant Cell, 2012, 24, 1285-1300.	6.6	137
22	Activity Profiling of Papain-Like Cysteine Proteases in Plants. Plant Physiology, 2004, 135, 1170-1178.	4.8	135
23	Enzymeâ€"inhibitor interactions at the plantâ€"pathogen interface. Current Opinion in Plant Biology, 2008, 11, 380-388.	7.1	124
24	A Role in Immunity for Arabidopsis Cysteine Protease RD21, the Ortholog of the Tomato Immune Protease C14. PLoS ONE, 2012, 7, e29317.	2.5	120
25	Structureâ€"Function Analysis of Cf-9, a Receptor-Like Protein with Extracytoplasmic Leucine-Rich Repeatswâƒž. Plant Cell, 2005, 17, 1000-1015.	6.6	112
26	From structure to function â€" a family portrait of plant subtilases. New Phytologist, 2018, 218, 901-915.	7.3	108
27	Papainâ€like cysteine proteases: key players at molecular battlefields employed by both plants and their invaders. Molecular Plant Pathology, 2008, 9, 119-125.	4.2	102
28	Glycosidase and glycan polymorphism control hydrolytic release of immunogenic flagellin peptides. Science, 2019, 364, .	12.6	102
29	Identification of Distinct Specificity Determinants in Resistance Protein Cf-4 Allows Construction of a Cf-9 Mutant That Confers Recognition of Avirulence Protein AVR4. Plant Cell, 2001, 13, 273-285.	6.6	98
30	Diversity of Serine Hydrolase Activities of Unchallenged and Botrytis-infected Arabidopsis thaliana. Molecular and Cellular Proteomics, 2009, 8, 1082-1093.	3.8	93
31	Distinct features of post-transcriptional gene silencing by antisense transgenes in single copy and inverted T-DNA repeat loci. Plant Journal, 2000, 21, 27-42.	5.7	85
32	Emerging principles in plant chemical genetics. Trends in Plant Science, 2010, 15, 81-88.	8.8	80
33	Post-Translational Regulation and Trafficking of the Granulin-Containing Protease RD21 of Arabidopsis thaliana. PLoS ONE, 2012, 7, e32422.	2.5	80
34	Juggling jobs: roles and mechanisms of multifunctional protease inhibitors in plants. New Phytologist, 2016, 210, 794-807.	7.3	79
35	No Evidence for Binding Between Resistance Gene Product Cf-9 of Tomato and Avirulence Gene Product AVR9 of Cladosporium fulvum. Molecular Plant-Microbe Interactions, 2001, 14, 867-876.	2.6	78
36	Chemical Proteomics with Sulfonyl Fluoride Probes Reveals Selective Labeling of Functional Tyrosines in Glutathione Transferases. Chemistry and Biology, 2013, 20, 541-548.	6.0	78

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37	Species-specific antimicrobial activity of essential oils and enhancement by encapsulation in mesoporous silica nanoparticles. Industrial Crops and Products, 2018, 122, 582-590.	5.2	78
38	Intragenic recombination generated two distinct Cf genes that mediate AVR9 recognition in the natural population of Lycopersicon pimpinellifolium. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 10493-10498.	7.1	76
39	Functional Divergence of Two Secreted Immune Proteases of Tomato. Current Biology, 2015, 25, 2300-2306.	3.9	72
40	Classification and Nomenclature of Metacaspases and Paracaspases: No More Confusion with Caspases. Molecular Cell, 2020, 77, 927-929.	9.7	71
41	Î²-Lactone probes identify a papain-like peptide ligase in Arabidopsis thaliana. Nature Chemical Biology, 2008, 4, 557-563.	8.0	69
42	The Antimalarial Natural Product Symplostatin 4 Is a Nanomolar Inhibitor of the Food Vacuole Falcipains. Chemistry and Biology, 2012, 19, 1546-1555.	6.0	67
43	Sulfonyl Fluoride Analogues as Activityâ€Based Probes for Serine Proteases. ChemBioChem, 2012, 13, 2327-2330.	2.6	67
44	Balancing Selection at the Tomato RCR3 Guardee Gene Family Maintains Variation in Strength of Pathogen Defense. PLoS Genetics, 2012, 8, e1002813.	3.5	66
45	Plant life needs cell death, but does plant cell death need Cys proteases?. FEBS Journal, 2017, 284, 1577-1585.	4.7	62
46	Three unrelated protease inhibitors enhance accumulation of pharmaceutical recombinant proteins in <i>Nicotiana benthamiana</i>. Plant Biotechnology Journal, 2018, 16, 1797-1810.	8.3	61
47	Proteasome activity profiling: a simple, robust and versatile method revealing subunit-selective inhibitors and cytoplasmic, defense-induced proteasome activities. Plant Journal, 2010, 62, 160-170.	5.7	59
48	Activity profiling of vacuolar processing enzymes reveals a role for <scp>VPE</scp> during oomycete infection. Plant Journal, 2013, 73, 689-700.	5.7	58
49	Proteasome Activity Imaging and Profiling Characterizes Bacterial Effector Syringolin A Â. Plant Physiology, 2011, 155, 477-489.	4.8	57
50	Enhancing cinnamon essential oil activity by nanoparticle encapsulation to control seed pathogens. Industrial Crops and Products, 2018, 124, 755-764.	5.2	57
51	Pseudomonas syringae pv. syringae Uses Proteasome Inhibitor Syringolin A to Colonize from Wound Infection Sites. PLoS Pathogens, 2013, 9, e1003281.	4.7	56
52	Minitags for small molecules: detecting targets of reactive small molecules in living plant tissues using â€˜click chemistryâ€™. Plant Journal, 2009, 57, 373-385.	5.7	55
53	Broad-range Glycosidase Activity Profiling. Molecular and Cellular Proteomics, 2014, 13, 2787-2800.	3.8	55
54	Extracellular proteolytic cascade in tomato activates immune protease Rcr3. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17409-17417.	7.1	55

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55	The transcriptome, extracellular proteome and active secretome of agroinfiltrated <i>Nicotiana benthamiana</i> uncover a large, diverse protease repertoire. Plant Biotechnology Journal, 2018, 16, 1068-1084.	8.3	54
56	The Increasing Impact of Activity-Based Protein Profiling in Plant Science. Plant and Cell Physiology, 2016, 57, 446-461.	3.1	52
57	Proteolytic Pathways Induced by Herbicides That Inhibit Amino Acid Biosynthesis. PLoS ONE, 2013, 8, e73847.	2.5	52
58	Screen of Non-annotated Small Secreted Proteins of Pseudomonas syringae Reveals a Virulence Factor That Inhibits Tomato Immune Proteases. PLoS Pathogens, 2016, 12, e1005874.	4.7	50
59	A homology-guided, genome-based proteome for improved proteomics in the alloploid Nicotiana benthamiana. BMC Genomics, 2019, 20, 722.	2.8	50
60	Ten Prominent Host Proteases in Plant-Pathogen Interactions. International Journal of Molecular Sciences, 2018, 19, 639.	4.1	48
61	Characterization of senescence-associated protease activities involved in the efficient protein remobilization during leaf senescence of winter oilseed rape. Plant Science, 2016, 246, 139-153.	3.6	46
62	Beta galactosidases in Arabidopsis and tomatoâ€“a mini review. Biochemical Society Transactions, 2016, 44, 150-158.	3.4	44
63	Nâ€terminomics reveals control of Arabidopsis seed storage proteins and proteases by the Arg/Nâ€end rule pathway. New Phytologist, 2018, 218, 1106-1126.	7.3	44
64	Small molecule approaches in plants. Current Opinion in Chemical Biology, 2007, 11, 88-98.	6.1	42
65	The structural basis of specific proteaseâ€“inhibitor interactions at the plantâ€“pathogen interface. Current Opinion in Structural Biology, 2013, 23, 842-850.	5.7	42
66	<scp>PIRIN</scp>2 stabilizes cysteine protease <scp>XCP</scp>2 and increases susceptibility to the vascular pathogen <i>Ralstonia solanacearum</i> in Arabidopsis. Plant Journal, 2014, 79, 1009-1019.	5.7	41
67	Subfamily-Specific Fluorescent Probes for Cysteine Proteases Display Dynamic Protease Activities during Seed Germination. Plant Physiology, 2015, 168, 1462-1475.	4.8	41
68	Mining the active proteome in plant science and biotechnology. Current Opinion in Biotechnology, 2010, 21, 225-233.	6.6	35
69	Evolution of a guarded decoy protease and its receptor in solanaceous plants. Nature Communications, 2020, 11, 4393.	12.8	35
70	Defeated by the nines: nine extracellular strategies to avoid microbe-associated molecular patterns recognition in plants. Plant Cell, 2021, 33, 2116-2130.	6.6	35
71	The maize cystatin CC9 interacts with apoplastic cysteine proteases. Plant Signaling and Behavior, 2012, 7, 1397-1401.	2.4	34
72	An upstream regulator of the 26<scp>S</scp> proteasome modulates organ size in <i><scp>A</scp>rabidopsis thaliana</i>. Plant Journal, 2013, 74, 25-36.	5.7	34

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73	Rapid migration in gel filtration of the Cf-4 and Cf-9 resistance proteins is an intrinsic property of Cf proteins and not because of their association with high-molecular-weight proteins. Plant Journal, 2003, 35, 305-315.	5.7	33
74	Selective Conjugation of Proteins by Mining Active Proteomes through Click-Functionalized Magnetic Nanoparticles. ACS Nano, 2013, 7, 9655-9663.	14.6	33
75	Profiling Protein Kinases and Other ATP Binding Proteins in Arabidopsis Using Acyl-ATP Probes. Molecular and Cellular Proteomics, 2013, 12, 2481-2496.	3.8	31
76	<i>Pseudomonas syringae</i> colonizes distant tissues in <i>Nicotiana benthamiana</i> through xylem vessels. Plant Journal, 2011, 67, 774-782.	5.7	30
77	Reâ€targeting of a plant defense protease by a cyst nematode effector. Plant Journal, 2019, 98, 1000-1014.	5.7	30
78	Proteases of Nicotiana benthamiana: an emerging battle for molecular farming. Current Opinion in Biotechnology, 2020, 61, 60-65.	6.6	29
79	The death enzyme CP14 is a unique papain-like cysteine proteinase with a pronounced S2 subsite selectivity. Archives of Biochemistry and Biophysics, 2016, 603, 110-117.	3.0	28
80	BGAL1 depletion boosts the level of Î²â€galactosylation of <i>N</i>â€•and <i>O</i>â€glycans in <i>N.Âbenthamiana</i>. Plant Biotechnology Journal, 2020, 18, 1537-1549.	8.3	28
81	Dynamic hydrolase activities precede hypersensitive tissue collapse in tomato seedlings. New Phytologist, 2014, 203, 913-925.	7.3	26
82	Major Cys protease activities are not essential for senescence in individually darkened Arabidopsis leaves. BMC Plant Biology, 2017, 17, 4.	3.6	26
83	The C-terminal Dilysine Motif for Targeting to the Endoplasmic Reticulum Is Not Required for Cf-9 Function. Molecular Plant-Microbe Interactions, 2001, 14, 412-415.	2.6	24
84	Protease Activities Triggered by Ralstonia solanacearum Infection in Susceptible and Tolerant Tomato Lines. Molecular and Cellular Proteomics, 2018, 17, 1112-1125.	3.8	24
85	Sphingolipid-induced cell death in Arabidopsis is negatively regulated by the papain-like cysteine protease RD21. Plant Science, 2019, 280, 12-17.	3.6	24
86	Cleavage of a pathogen apoplastic protein by plant subtilases activates host immunity. New Phytologist, 2021, 229, 3424-3439.	7.3	24
87	Selective inhibition of plant serine hydrolases by agrochemicals revealed by competitive ABPP. Bioorganic and Medicinal Chemistry, 2012, 20, 597-600.	3.0	23
88	The molecular basis of co-evolution between Cladosporium fulvum and tomato. Antonie Van Leeuwenhoek, 2002, 81, 409-412.	1.7	22
89	Vacuolar processing enzyme activates programmed cell death in the apical meristem inducing loss of apical dominance. Plant, Cell and Environment, 2017, 40, 2381-2392.	5.7	22
90	The front line of defence: a meta-analysis of apoplastic proteases in plant immunity. Journal of Experimental Botany, 2021, 72, 3381-3394.	4.8	22

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91	A structural biology perspective on bioactive small molecules and their plant targets. Current Opinion in Plant Biology, 2011, 14, 480-488.	7.1	21
92	A para-nitrophenol phosphonate probe labels distinct serine hydrolases of Arabidopsis. Bioorganic and Medicinal Chemistry, 2012, 20, 601-606.	3.0	21
93	Multiplex Fluorescent, Activity-Based Protein Profiling Identifies Active Î±-Glycosidases and Other Hydrolases in Plants. Plant Physiology, 2018, 177, 24-37.	4.8	20
94	Tricked or trappedâ€"Two decoy mechanisms in hostâ€"pathogen interactions. PLoS Pathogens, 2018, 14, e1006761.	4.7	20
95	A model of the C14-EPIC complex indicates hotspots for a protease-inhibitor arms race in the oomycete-potato interaction. Plant Signaling and Behavior, 2011, 6, 109-112.	2.4	19
96	Identification of a Selective, Activityâ€Based Probe for Glyceraldehyde 3â€Phosphate Dehydrogenases. Angewandte Chemie - International Edition, 2012, 51, 5230-5233.	13.8	19
97	Decoy Engineering: The Next Step in Resistance Breeding. Trends in Plant Science, 2016, 21, 371-373.	8.8	19
98	Activity profiling reveals changes in the diversity and activity of proteins in Arabidopsis roots in response to nematode infection. Plant Physiology and Biochemistry, 2015, 97, 36-43.	5.8	18
99	Plant proteases: from molecular mechanisms to functions in development and immunity. Journal of Experimental Botany, 2021, 72, 3337-3339.	4.8	18
100	Probes for activityâ€based profiling of plant proteases. Physiologia Plantarum, 2012, 145, 18-27.	5.2	17
101	Proteasome Activity Profiling Uncovers Alteration of Catalytic Î²2 and Î²5 Subunits of the Stress-Induced Proteasome during Salinity Stress in Tomato Roots. Frontiers in Plant Science, 2017, 8, 107.	3.6	17
102	Agromonas: a rapid disease assay for <i>Pseudomonas syringae</i> growth in agroinfiltrated leaves. Plant Journal, 2021, 105, 831-840.	5.7	17
103	Do proteolytic cascades exist in plants?. Journal of Experimental Botany, 2019, 70, 1997-2002.	4.8	16
104	Mining the active proteome of Arabidopsis thaliana. Frontiers in Plant Science, 2011, 2, 89.	3.6	15
105	Labeling and enrichment of Arabidopsis thaliana matrix metalloproteases using an active-site directed, marimastat-based photoreactive probe. Bioorganic and Medicinal Chemistry, 2012, 20, 592-596.	3.0	14
106	A Substrate-Inspired Probe Monitors Translocation, Activation, and Subcellular Targeting of Bacterial Type III Effector Protease AvrPphB. Chemistry and Biology, 2013, 20, 168-176.	6.0	14
107	Activityâ€based proteomics reveals nine target proteases for the recombinant proteinâ€stabilizing inhibitor <i>Sl</i><scp>CYS</scp>8 in <i>Nicotiana benthamiana</i>. Plant Biotechnology Journal, 2019, 17, 1670-1678.	8.3	14
108	Subunitâ€selective proteasome activity profiling uncovers uncoupled proteasome subunit activities during bacterial infections. Plant Journal, 2017, 90, 418-430.	5.7	13

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109	A Genotypic Comparison Reveals That the Improvement in Nitrogen Remobilization Efficiency in Oilseed Rape Leaves Is Related to Specific Patterns of Senescence-Associated Protease Activities and Phytohormones. Frontiers in Plant Science, 2019, 10, 46.	3.6	13
110	DIGE-ABPP by Click Chemistry: Pairwise Comparison of Serine Hydrolase Activities from the Apoplast of Infected Plants. Methods in Molecular Biology, 2014, 1127, 183-194.	0.9	12
111	SNARE-RNAi Results in Higher Terpene Emission from Ectopically Expressed Caryophyllene Synthase in Nicotiana benthamiana. Molecular Plant, 2015, 8, 454-466.	8.3	12
112	Activity-Based Protein Profiling of Infected Plants. Methods in Molecular Biology, 2012, 835, 47-59.	0.9	12
113	Unravelling the mode of action of plant proteases. New Phytologist, 2018, 218, 879-881.	7.3	11
114	Proteomic Investigations of Proteases Involved in Cotyledon Senescence: A Model to Explore the Genotypic Variability of Proteolysis Machinery Associated with Nitrogen Remobilization Efficiency during the Leaf Senescence of Oilseed Rape. Proteomes, 2017, 5, 29.	3.5	10
115	The impact of plantâ€“pathogen studies on medicinal drug discovery. Chemical Society Reviews, 2012, 41, 3168.	38.1	9
116	Activityâ€based protein profiling of hydrolytic enzymes induced by gibberellic acid in isolated aleurone layers of malting barley. FEBS Letters, 2016, 590, 2956-2962.	2.8	9
117	Bodyguards: Pathogen-Derived Decoys That Protect Virulence Factors. Trends in Plant Science, 2017, 22, 355-357.	8.8	9
118	Inhibitor Discovery by Convolution ABPP. Methods in Molecular Biology, 2017, 1491, 47-56.	0.9	8
119	Twelve ways to confirm targets of activity-based probes in plants. Bioorganic and Medicinal Chemistry, 2016, 24, 3304-3311.	3.0	7
120	Caught green-handed: methods for in vivo detection and visualization of protease activity. Journal of Experimental Botany, 2019, 70, 2125-2141.	4.8	7
121	AgroLux: bioluminescent <i>Agrobacterium</i> to improve molecular pharming and study plant immunity. Plant Journal, 2021, 108, 600-612.	5.7	7
122	Nicotinamide Cofactors Suppress Active-Site Labeling of Aldehyde Dehydrogenases. ACS Chemical Biology, 2016, 11, 1578-1586.	3.4	6
123	Triazine Probes Target Ascorbate Peroxidases in Plants. Plant Physiology, 2019, 180, 1848-1859.	4.8	5
124	Generation of transgenic cell suspension cultures of the model legume Medicago truncatula: a rapid method for Agrobacterium mediated gene transfer. Plant Cell, Tissue and Organ Culture, 2019, 136, 445-450.	2.3	5
125	Plant Biology: Proteolytic Release of Damage Signals. Current Biology, 2019, 29, R378-R380.	3.9	4
126	Plant Biology: Distinct New Players in Processing Peptide Hormones during Abscission. Current Biology, 2020, 30, R715-R717.	3.9	4

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127	Inspirational decoys: a new hunt for effector targets. New Phytologist, 2016, 210, 371-373.	7.3	3
128	Broadâ€range metalloprotease profiling in plants uncovers immunity provided by defenceâ€related metalloenzyme. New Phytologist, 2022, 235, 1287-1301.	7.3	3
129	Capture of endogenously biotinylated proteins from Pseudomonas aeruginosa displays unexpected downregulation of LiuD upon iron nutrition. Bioorganic and Medicinal Chemistry, 2016, 24, 3330-3335.	3.0	1
130	How to build an effective research network: lessons from two decades of the GARNet plant science community. Journal of Experimental Botany, 2020, 71, 6881-6889.	4.8	0
131	Monitoring Pseudomonas syringae Growth in Agroinfiltrated Leaves: The â€œAgromonasâ€• Assay. Methods in Molecular Biology, 2022, 2447, 247-259.	0.9	0