Alfredo Herrera-Estrella

List of Publications by Year
in descending order

124 papers	10,314 citations	29994 54 h-index	35952 97 g-index
132 all docs	132 docs citations	132 times ranked	7844 citing authors

#	Article	IF	Citations
1	Trichoderma: the genomics of opportunistic success. Nature Reviews Microbiology, 2011, 9, 749-759.	13.6	814
2	Comparative genome sequence analysis underscores mycoparasitism as the ancestral life style of Trichoderma. Genome Biology, 2011, 12, R40.	3.8	594
3	<i>Trichoderma</i> Research in the Genome Era. Annual Review of Phytopathology, 2013, 51, 105-129.	3.5	370
4	Trichoderma as biostimulant: exploiting the multilevel properties of a plant beneficial fungus. Scientia Horticulturae, 2015, 196, 109-123.	1.7	320
5	Architecture and evolution of a minute plant genome. Nature, 2013, 498, 94-98.	13.7	293
6	Biological Control of the Root-Knot Nematode Meloidogyne javanica by Trichoderma harzianum. Phytopathology, 2001, 91, 687-693.	1.1	267
7	Molecular characterization of the proteinase-encoding gene, prb1, related to mycoparasitism by Trichoderma harzianum. Molecular Microbiology, 1993, 8, 603-613.	1.2	235
8	Colonization of Arabidopsis roots by Trichoderma atroviride promotes growth and enhances systemic disease resistance through jasmonic acid/ethylene and salicylic acid pathways. European Journal of Plant Pathology, 2011, 131, 15-26.	0.8	231
9	Fungal Morphogenesis, from the Polarized Growth of Hyphae to Complex Reproduction and Infection Structures. Microbiology and Molecular Biology Reviews, 2018, 82, .	2.9	231
10	Characterization of ech-42, a Trichoderma harzianum endochitinase gene expressed during mycoparasitism.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 10903-10907.	3.3	218
11	<i>Trichoderma</i>-induced plant immunity likely involves both hormonal- and camalexin-dependent mechanisms in<i>Arabidopsis thaliana</i>and confers resistance against necrotrophicÂfungi<i>Botrytis cinerea</i>.. Plant Signaling and Behavior, 2011, 6, 1554-1563.	1.2	217
12	The Genomes of Three Uneven Siblings: Footprints of the Lifestyles of Three Trichoderma Species. Microbiology and Molecular Biology Reviews, 2016, 80, 205-327.	2.9	194
13	<i>Trichoderma</i> Species: Versatile Plant Symbionts. Phytopathology, 2019, 109, 6-16.	1.1	178
14	Improved biocontrol activity of Trichoderma harzianum by over-expression of the proteinase-encoding gene prb1. Current Genetics, 1997, 31, 30-37.	0.8	176
15	Expansion of Signal Transduction Pathways in Fungi by Extensive Genome Duplication. Current Biology, 2016, 26, 1577-1584.	1.8	175
16	Genome and transcriptome analysis of the Mesoamerican common bean and the role of gene duplications in establishing tissue and temporal specialization of genes. Genome Biology, 2016, 17, 32.	3.8	166
17	BLR-1 and BLR-2, key regulatory elements of photoconidiation and mycelial growth in Trichoderma atroviride. Microbiology (United Kingdom), 2004, 150, 3561-3569.	0.7	163
18	Role of the <i>Trichoderma harzianum</i> Endochitinase Gene, <i>ech42</i> , in Mycoparasitism. Applied and Environmental Microbiology, 1999, 65, 929-935.	1.4	153

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19	Genomic history of the origin and domestication of common bean unveils its closest sister species. Genome Biology, 2017, 18, 60.	3.8	142
20	Transcriptomic response of the mycoparasitic fungus Trichoderma atroviride to the presence of a fungal prey. BMC Genomics, 2009, 10, 567.	1.2	141
21	Trichoderma atroviride G-Protein Î±-Subunit Gene tga1 Is Involved in Mycoparasitic Coiling and Conidiation. Eukaryotic Cell, 2002, 1, 594-605.	3.4	139
22	The avocado genome informs deep angiosperm phylogeny, highlights introgressive hybridization, and reveals pathogen-influenced gene space adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17081-17089.	3.3	134
23	Enhanced biocontrol activity of Trichoderma through inactivation of a mitogen-activated protein kinase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15965-15970.	3.3	128
24	Identification of Mycoparasitism-Related Genes in Trichoderma atroviride. Applied and Environmental Microbiology, 2011, 77, 4361-4370.	1.4	127
25	VirD proteins of Agrobacterium tumefaciens are required for the formation of a covalent DNA-protein complex at the 5â€² terminus of T-strand molecules.. EMBO Journal, 1988, 7, 4055-4062.	3.5	125
26	A bacterial peptide acting as a plant nuclear targeting signal: the amino-terminal portion of Agrobacterium VirD2 protein directs a beta-galactosidase fusion protein into tobacco nuclei.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 9534-9537.	3.3	123
27	Looking through the eyes of fungi: molecular genetics of photoreception. Molecular Microbiology, 2007, 64, 5-15.	1.2	123
28	Identification of effector-like proteins in Trichoderma spp. and role of a hydrophobin in the plant-fungus interaction and mycoparasitism. BMC Genetics, 2017, 18, 16.	2.7	122
29	Crucial factors of the light perception machinery and their impact on growth and cellulase gene transcription in Trichoderma reesei. Fungal Genetics and Biology, 2010, 47, 468-476.	0.9	119
30	The expression of genes involved in parasitism by Trichoderma harzianum is triggered by a diffusible factor. Molecular Genetics and Genomics, 1998, 260, 218-225.	2.4	118
31	Cross Talk between a Fungal Blue-Light Perception System and the Cyclic AMP Signaling Pathway. Eukaryotic Cell, 2006, 5, 499-506.	3.4	108
32	Notes High-efficiency transformation system for the biocontrol agents, Trichoderma spp.. Molecular Microbiology, 1990, 4, 839-843.	1.2	105
33	Analysis of the Î²-1,3-Glucanolytic System of the Biocontrol Agent <i>Trichoderma harzianum</i>. Applied and Environmental Microbiology, 1998, 64, 1442-1446.	1.4	102
34	Trichoderma in the light of day â€" Physiology and development. Fungal Genetics and Biology, 2010, 47, 909-916.	0.9	102
35	An injury-response mechanism conserved across kingdoms determines entry of the fungus <i>Trichoderma atroviride</i> into development. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14918-14923.	3.3	99
36	Chitinases in biological control. , 1999, 87, 171-184.		98

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37	Cellulase Induction in Trichoderma reesei by Cellulose Requires Its Own Basal Expression. Journal of Biological Chemistry, 1997, 272, 10169-10174.	1.6	96
38	The 4-phosphopantetheinyl transferase of Trichoderma virens plays a role in plant protection against Botrytis cinerea through volatile organic compound emission. Plant and Soil, 2014, 379, 261-274.	1.8	95
39	The genome of <i>Bacillus coahuilensis</i> reveals adaptations essential for survival in the relic of an ancient marine environment. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 5803-5808.	3.3	94
40	The Epl1 and Sm1 proteins from Trichoderma atroviride and Trichoderma virens differentially modulate systemic disease resistance against different life style pathogens in Solanum lycopersicum. Frontiers in Plant Science, 2015, 6, 77.	1.7	93
41	Role of the 4-Phosphopantetheinyl Transferase of <i>Trichoderma virens</i> in Secondary Metabolism and Induction of Plant Defense Responses. Molecular Plant-Microbe Interactions, 2011, 24, 1459-1471.	1.4	89
42	Trichoderma: sensing the environment for survival and dispersal. Microbiology (United Kingdom), 2012, 158, 3-16.	0.7	88
43	The <scp>RNAi</scp> machinery regulates growth and development in the filamentous fungus <i><scp>T</scp>richoderma atroviride</i>. Molecular Microbiology, 2013, 89, 96-112.	1.2	88
44	Rapid Blue Light Regulation of a Trichoderma harzianum Photolyase Gene. Journal of Biological Chemistry, 1999, 274, 14288-14294.	1.6	79
45	Trichoderma atroviride PHR1, a Fungal Photolyase Responsible for DNA Repair, Autoregulates Its Own Photoinduction. Eukaryotic Cell, 2007, 6, 1682-1692.	3.4	79
46	The Palomero Genome Suggests Metal Effects on Domestication. Science, 2009, 326, 1078-1078.	6.0	77
47	Novel light-regulated genes in Trichoderma atroviride: a dissection by cDNA microarrays. Microbiology (United Kingdom), 2006, 152, 3305-3317.	0.7	74
48	Transformation of Trichoderma harzianum by high-voltage electric pulse. Current Genetics, 1990, 17, 169-174.	0.8	71
49	Deep sampling of the Palomero maize transcriptome by a high throughput strategy of pyrosequencing. BMC Genomics, 2009, 10, 299.	1.2	69
50	Global Transcriptome Analysis of the Scorpion Centruroides noxius: New Toxin Families and Evolutionary Insights from an Ancestral Scorpion Species. PLoS ONE, 2012, 7, e43331.	1.1	69
51	Molecular characterization, cloning and structural analysis of a cDNA encoding an amaranth globulin. Journal of Plant Physiology, 1996, 149, 527-532.	1.6	60
52	Trichoderma-Induced Acidification Is an Early Trigger for Changes in Arabidopsis Root Growth and Determines Fungal Phytostimulation. Frontiers in Plant Science, 2017, 8, 822.	1.7	60
53	A <scp><i>T</i></scp><i>richoderma atroviride</i> stressâ€activated MAPK pathway integrates stress and light signals. Molecular Microbiology, 2016, 100, 860-876.	1.2	58
54	Glycine betaine allows enhanced induction of the Agrobacterium tumefaciens vir genes by acetosyringone at low pH. Journal of Bacteriology, 1988, 170, 5822-5829.	1.0	57

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55	A nucleotide substitution in one of the Î²-tubulin genes of Trichoderma viride confers resistance to the antimitotic drug methyl benzimidazole-2-yl-carbamate. Molecular Genetics and Genomics, 1993, 240, 73-80.	2.4	57
56	Xenobiotic Compounds Degradation by Heterologous Expression of a Trametes sanguineus Laccase in Trichoderma atroviride. PLoS ONE, 2016, 11, e0147997.	1.1	55
57	Overexpression of virD1 and virD2 genes in Agrobacterium tumefaciens enhances T-complex formation and plant transformation. Journal of Bacteriology, 1990, 172, 4432-4440.	1.0	54
58	Multiple environmental signals determine the transcriptional activation of the mycoparasitism related gene prb1 in Trichoderma atroviride. Molecular Genetics and Genomics, 2002, 267, 703-712.	1.0	54
59	Global transcriptional analysis suggests Lasiodiplodia theobromae pathogenicity factors involved in modulation of grapevine defensive response. BMC Genomics, 2016, 17, 615.	1.2	51
60	Transcriptomics and molecular evolutionary rate analysis of the bladderwort (Utricularia), a carnivorous plant with a minimal genome. BMC Plant Biology, 2011, 11, 101.	1.6	50
61	Formation of Atroviridin by <i>Hypocrea atroviridis</i> Is Conidiation Associated and Positively Regulated by Blue Light and the G Protein GNA3. Eukaryotic Cell, 2007, 6, 2332-2342.	3.4	48
62	Damage response involves mechanisms conserved across plants, animals and fungi. Current Genetics, 2015, 61, 359-372.	0.8	48
63	Enhanced responsiveness and sensitivity to blue light by blr-2 overexpression in Trichoderma atroviride. Microbiology (United Kingdom), 2007, 153, 3909-3922.	0.7	47
64	Extracellular ATP activates MAPK and ROS signaling during injury response in the fungus Trichoderma atroviride. Frontiers in Plant Science, 2014, 5, 659.	1.7	47
65	Light-regulated asexual reproduction in Paecilomyces fumosoroseus. Microbiology (United Kingdom), 2004, 150, 311-319.	0.7	46
66	The Complexity of Fungal Vision. Microbiology Spectrum, 2016, 4, .	1.2	46
67	G protein activators and cAMP promote mycoparasitic behaviour in Trichoderma harzianum. Mycological Research, 1999, 103, 1637-1642.	2.5	43
68	The Trichoderma atroviride cryptochrome/photolyase genes regulate the expression of blr1-independent genes both in red and blue light. Fungal Biology, 2016, 120, 500-512.	1.1	42
69	Characterization of Blue-light and Developmental Regulation of the Photolyase gene phr1 in Trichoderma harzianum. Photochemistry and Photobiology, 2000, 71, 662.	1.3	41
70	Molecular characterization and regulation of the phosphoglycerate kinase gene from Trichoderma viride. Molecular Microbiology, 1992, 6, 1231-1242.	1.2	36
71	Electrophoretic karyotype and gene assignment to resolved chromosomes of Trichoderma spp.. Molecular Microbiology, 1993, 7, 515-521.	1.2	34
72	The MAP kinase TVK1 regulates conidiation, hydrophobicity and the expression of genes encoding cell wall proteins in the fungus Trichoderma virens. Microbiology (United Kingdom), 2007, 153, 2137-2147.	0.7	34

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73	An Adult Zebrafish Model Reveals that Mucormycosis Induces Apoptosis of Infected Macrophages. Scientific Reports, 2018, 8, 12802.	1.6	33
74	Trichoderma atroviride Transcriptional Regulator Xyr1 Supports the Induction of Systemic Resistance in Plants. Applied and Environmental Microbiology, 2014, 80, 5274-5281.	1.4	32
75	The interaction of fungi with the environment orchestrated by RNAi. Mycologia, 2016, 108, 556-571.	0.8	32
76	The NADPH Oxidases Nox1 and Nox2 Differentially Regulate Volatile Organic Compounds, Fungistatic Activity, Plant Growth Promotion and Nutrient Assimilation in Trichoderma atroviride. Frontiers in Microbiology, 2018, 9, 3271.	1.5	31
77	<i>Trichoderma atroviride</i>â€emitted volatiles improve growth of <i>Arabidopsis</i> seedlings through modulation of sucrose transport and metabolism. Plant, Cell and Environment, 2021, 44, 1961-1976.	2.8	31
78	Genetic diversity and vegetative compatibility among Trichoderma harzianum isolates. Molecular Genetics and Genomics, 1997, 256, 127-135.	2.4	30
79	The fungal NADPH oxidase is an essential element for the molecular dialog between Trichoderma and Arabidopsis. Plant Journal, 2020, 103, 2178-2192.	2.8	28
80	Three Decades of Fungal Transformation: Key Concepts and Applications. , 2004, 267, 297-314.		27
81	Colonization of the rhizosphere, rhizoplane and endorhiza of garlic (Allium sativum L.) by strains of Trichoderma harzianum and their capacity to control allium white-rot under field conditions. Soil Biology and Biochemistry, 2006, 38, 1823-1830.	4.2	27
82	Proteomic Analysis of Trichoderma atroviride Reveals Independent Roles for Transcription Factors BLR-1 and BLR-2 in Light and Darkness. Eukaryotic Cell, 2012, 11, 30-41.	3.4	27
83	Danger signals activate a putative innate immune system during regeneration in a filamentous fungus. PLoS Genetics, 2018, 14, e1007390.	1.5	27
84	Overexpression, purification and characterization of the Trichoderma atroviride endochitinase, Ech42, in Pichia pastoris. Protein Expression and Purification, 2007, 55, 183-188.	0.6	26
85	The Trichoderma atroviride putative transcription factor Blu7 controls light responsiveness and tolerance. BMC Genomics, 2016, 17, 327.	1.2	25
86	Protein analysis reveals differential accumulation of late embryogenesis abundant and storage proteins in seeds of wild and cultivated amaranth species. BMC Plant Biology, 2019, 19, 59.	1.6	25
87	A Ras GTPase associated protein is involved in the phototropic and circadian photobiology responses in fungi. Scientific Reports, 2017, 7, 44790.	1.6	22
88	Morphological, proximal composition, and bioactive compounds characterization of wild and cultivated amaranth (Amaranthus spp.) species. Journal of Cereal Science, 2018, 83, 222-228.	1.8	21
89	The Alpha Variant (B.1.1.7) of SARS-CoV-2 Failed to Become Dominant in Mexico. Microbiology Spectrum, 2022, 10, e0224021.	1.2	21
90	Fate of transformed <i>Trichoderma harzianum</i> in the phylloplane of tomato plants. Molecular Ecology, 1994, 3, 153-159.	2.0	20

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91	Effect of textile dyes on activity and differential regulation of laccase genes from Pleurotus ostreatus grown in submerged fermentation. AMB Express, 2016, 6, 93.	1.4	19
92	<i>Trichoderma atroviride</i> from Predator to Prey: Role of the Mitogen-Activated Protein Kinase Tmk3 in Fungal Chemical Defense against Fungivory by <i>Drosophila melanogaster</i> Larvae. Applied and Environmental Microbiology, 2019, 85, .	1.4	19
93	Photoreactivation of UV-Inactivated Spores of Trichoderma harzianum. Photochemistry and Photobiology, 1997, 65, 849-854.	1.3	18
94	Three Decades of Fungal Transformation: Novel Technologies. , 2004, 267, 315-326.		18
95	Developmental Regulation of cmp1, a Gene Encoding a Multidomain Conidiospore Surface Protein of Trichoderma. Fungal Genetics and Biology, 1999, 27, 88-99.	0.9	17
96	The Trichoderma reesei Cry1 Protein Is a Member of the Cryptochrome/Photolyase Family with 6â€“4 Photoproduct Repair Activity. PLoS ONE, 2014, 9, e100625.	1.1	17
97	De novo sequencing and analysis of Lophophora williamsii transcriptome, and searching for putative genes involved in mescaline biosynthesis. BMC Genomics, 2015, 16, 657.	1.2	17
98	Molecular cloning of the imidazoleglycerolphosphate dehydratase gene of Trichoderma harzianum by genetic complementation in Saccharomyces cerevisiae using a direct expression vector. Molecular Genetics and Genomics, 1992, 234, 481-488.	2.4	16
99	Glyceraldehyde-3-phosphate dehydrogenase expression in Trichoderma harzianum is repressed during conidiation and mycoparasitism. Microbiology (United Kingdom), 1997, 143, 3157-3164.	0.7	16
100	Synthesis of 6-Substituted 1-oxoindanoyl Isoleucine Conjugates and Modeling Studies with the COI1-JAZ Co-Receptor Complex of Lima Bean. Journal of Chemical Ecology, 2014, 40, 687-699.	0.9	16
101	Is GC bias in the nuclear genome of the carnivorous plant UtriculariaÂdriven by ROS-based mutation and biased gene conversion?. Plant Signaling and Behavior, 2011, 6, 1631-1634.	1.2	13
102	Dominance of Three Sublineages of the SARS-CoV-2 Delta Variant in Mexico. Viruses, 2022, 14, 1165.	1.5	12
103	A new species of Phaseolus (Leguminosae, Papilionoideae) sister to Phaseolus vulgaris, the common bean. Phytotaxa, 2017, 313, 259.	0.1	10
104	The advantage of parallel selection of domestication genes to accelerate crop improvement. Genome Biology, 2018, 19, 147.	3.8	10
105	IPA-1 a Putative Chromatin Remodeler/Helicase-Related Protein of <i>Trichoderma virens</i> Plays Important Roles in Antibiosis Against <i>Rhizoctonia solani</i> and Induction of <i>Arabidopsis</i> Systemic Disease Resistance. Molecular Plant-Microbe Interactions, 2020, 33, 808-824.	1.4	10
106	Cloning and characterization of a trypsin inhibitor cDNA from amaranth (Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 Td (hyp	2.0	8
107	Genome-Wide Approaches toward Understanding Mycotrophic Trichoderma Species. , 2014, , 455-464.		8
108	3 The Bright and Dark Sides of Fungal Life. , 2016, , 41-77.		8

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109	Biological Control Agents and Their Importance for the Plant Health. , 2020, , 13-36.		8
110	Assessment of the ptxD gene as a growth and selective marker in Trichoderma atroviride using Pccg6, a novel constitutive promoter. Microbial Cell Factories, 2020, 19, 69.	1.9	8
111	Editorial: Plant Disease Management in the Post-genomic Era: From Functional Genomics to Genome Editing. Frontiers in Microbiology, 2020, 11, 107.	1.5	8
112	A Global Analysis of Photoreceptor-Mediated Transcriptional Changes Reveals the Intricate Relationship Between Central Metabolism and DNA Repair in the Filamentous Fungus Trichoderma atroviride. Frontiers in Microbiology, 2021, 12, 724676.	1.5	8
113	F-actin dynamics following mechanical injury of Trichoderma atroviride and Neurospora crassa hyphae. Fungal Genetics and Biology, 2022, 159, 103672.	0.9	7
114	Sequence of theTrichoderma viridephosphoglycerate kinase gene. Nucleic Acids Research, 1990, 18, 6717-6717.	6.5	6
115	Effects on Capsicum annuum Plants Colonized with Trichoderma atroviride P. Karst Strains Genetically Modified in Taswo1, a Gene Coding for a Protein with Expansin-like Activity. Plants, 2021, 10, 1919.	1.6	6
116	Dynamics of a Novel Highly Repetitive CACTA Family in Common Bean (Phaseolus vulgaris). G3: Genes, Genomes, Genetics, 2016, 6, 2091-2101.	0.8	5
117	Theoretical model for the post-transcriptional regulation of the human c-myc gene expression, involving double-stranded RNA processing. Journal of Theoretical Biology, 1987, 125, 83-92.	0.8	4
118	Amaranth Protein Improves Lipid Profile and Insulin Resistance in a Diet-induced Obese Mice Model. Journal of Food and Nutrition Research (Newark, Del), 2017, 5, 914-924.	0.1	4
119	Drosophila attack inhibits hyphal regeneration and defense mechanisms activation for the fungus <i>Trichoderma atroviride</i>. ISME Journal, 2022, 16, 149-158.	4.4	2
120	Characterization of Blue-light and Developmental Regulation of the Photolyase gene phr1 in Trichoderma harzianum. Photochemistry and Photobiology, 2007, 71, 662-668.	1.3	1
121	13 Nematophagous Fungi. , 2016, , 247-267.		1
122	Requirement of Whole-Genome Sequencing. Compendium of Plant Genomes, 2017, , 109-128.	0.3	1
123	The Complexity of Fungal Vision. , 2017, , 441-461.		0
124	Strong preference for the integration of transforming DNA via homologous recombination in Trichoderma atroviride. Fungal Biology, 2020, 124, 854-863.	1.1	0