Santiago Gutirrez Martn

List of Publications by Citations

120 papers	3,810 citations	38 h-index	56 g-index
124 ext. papers	4,402 ext. citations	4 avg, IF	4.95 L-index

#	Paper	IF	Citations
120	The penicillin gene cluster is amplified in tandem repeats linked by conserved hexanucleotide sequences. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 6200-4	11.5	157
119	Transgenic expression of the Trichoderma harzianum hsp70 gene increases Arabidopsis resistance to heat and other abiotic stresses. *Journal of Plant Physiology*, **2010**, 167, 659-65	3.6	135
118	The ThPG1 endopolygalacturonase is required for the trichoderma harzianum-plant beneficial interaction. *Molecular Plant-Microbe Interactions*, **2009**, 22, 1021-31	3.6	130
117	Involvement of Trichoderma trichothecenes in the biocontrol activity and induction of plant defense-related genes. *Applied and Environmental Microbiology*, **2012**, 78, 4856-68	4.8	115
116	The contribution of Trichoderma to balancing the costs of plant growth and defense. *International Microbiology*, **2013**, 16, 69-80	3	115
115	Identification of loci and functional characterization of trichothecene biosynthesis genes in filamentous fungi of the genus Trichoderma. *Applied and Environmental Microbiology*, **2011**, 77, 4867-77	4.8	106
114	Overexpression of the trichodiene synthase gene tri5 increases trichodermin production and antimicrobial activity in Trichoderma brevicompactum. *Fungal Genetics and Biology*, **2011**, 48, 285-96	3.9	97
113	Evolution of structural diversity of trichothecenes, a family of toxins produced by plant pathogenic and entomopathogenic fungi. *PLoS Pathogens*, **2018**, 14, e1006946	7.6	90
112	Age-related clinical, serological, and histopathological features of celiac disease. *American Journal of Gastroenterology*, **2008**, 103, 2360-5; quiz 2366	0.7	82
111	Mutants blocked in penicillin biosynthesis show a deletion of the entire penicillin gene cluster at a specific site within a conserved hexanucleotide sequence. *Applied Microbiology and Biotechnology*, **1996**, 44, 597-604	5.7	79
110	The cefG gene of Cephalosporium acremonium is linked to the cefEF gene and encodes a deacetylcephalosporin C acetyltransferase closely related to homoserine O-acetyltransferase. *Journal of Bacteriology*, **1992**, 174, 3056-64	3.5	77
109	Relevance of trichothecenes in fungal physiology: disruption of tri5 in Trichoderma arundinaceum. *Fungal Genetics and Biology*, **2013**, 53, 22-33	3.9	72
108	Cloning and characterization of the erg1 gene of Trichoderma harzianum: effect of the erg1 silencing on ergosterol biosynthesis and resistance to terbinafine. *Fungal Genetics and Biology*, **2006**, 43, 164-78	3.9	69
107	Influence of Rhizoctonia solani and Trichoderma spp. in growth of bean (Phaseolus vulgaris L.) and in the induction of plant defense-related genes. *Frontiers in Plant Science*, **2015**, 6, 685	6.2	68
106	Resolution of four large chromosomes in penicillin-producing filamentous fungi: the penicillin gene cluster is located on chromosome II (9.6 Mb) in Penicillium notatum and chromosome I (10.4 Mb) in Penicillium chrysogenum. *Molecular Genetics and Genomics*, **1993**, 241, 573-8		66
105	The isopenicillin-N acyltransferase of Penicillium chrysogenum has isopenicillin-N amidohydrolase, 6-aminopenicillanic acid acyltransferase and penicillin amidase activities, all of which are encoded by the single penDE gene. *FEBS Journal*, **1993**, 215, 323-32		66
104	Functional analysis of the Trichoderma harzianum nox1 gene, encoding an NADPH oxidase, relates production of reactive oxygen species to specific biocontrol activity against Pythium ultimum. *Applied and Environmental Microbiology*, **2011**, 77, 3009-16	4.8	65

103	The cefT gene of Acremonium chrysogenum C10 encodes a putative multidrug efflux pump protein that significantly increases cephalosporin C production. *Molecular Genetics and Genomics*, **2002**, 267, 673-83	3.1	62
102	Expression of the cefG gene is limiting for cephalosporin biosynthesis in Acremonium chrysogenum. *Applied Microbiology and Biotechnology*, **1997**, 48, 606-14	5.7	61
101	Overexpression of a Trichoderma HSP70 gene increases fungal resistance to heat and other abiotic stresses. *Fungal Genetics and Biology*, **2008**, 45, 1506-13	3.9	59
100	A novel epimerization system in fungal secondary metabolism involved in the conversion of isopenicillin N into penicillin N in Acremonium chrysogenum. *Journal of Biological Chemistry*, **2002**, 277, 46216-25	5.4	57
99	The Cerato-Platanin protein Epl-1 from Trichoderma harzianum is involved in mycoparasitism, plant resistance induction and self cell wall protection. *Scientific Reports*, **2015**, 5, 17998	4.9	56
98	Generation, annotation and analysis of ESTs from Trichoderma harzianum CECT 2413. *BMC Genomics*, **2006**, 7, 193	4.5	53
97	Penicillin and cephalosporin biosynthesis: mechanism of carbon catabolite regulation of penicillin production. *Antonie Van Leeuwenhoek*, **1999**, 75, 21-31	2.1	53
96	Gene organization and plasticity of the beta-lactam genes in different filamentous fungi. *Antonie Van Leeuwenhoek*, **1999**, 75, 81-94	2.1	52
95	Cloning, characterization of the acyl-CoA:6-amino penicillanic acid acyltransferase gene of Aspergillus nidulans and linkage to the isopenicillin N synthase gene. *Molecular Genetics and Genomics*, **1990**, 221, 322-30		52
94	Production of trichodiene by Trichoderma harzianum alters the perception of this biocontrol strain by plants and antagonized fungi. *Environmental Microbiology*, **2015**, 17, 2628-46	5.2	51
93	Partial silencing of a hydroxy-methylglutaryl-CoA reductase-encoding gene in Trichoderma harzianum CECT 2413 results in a lower level of resistance to lovastatin and lower antifungal activity. *Fungal Genetics and Biology*, **2007**, 44, 269-83	3.9	50
92	Autonomously replicating plasmids carrying the AMA1 region in Penicillium chrysogenum. *Current Genetics*, **1996**, 29, 482-9	2.9	50
91	Silencing of the aspergillopepsin B (pepB) gene of Aspergillus awamori by antisense RNA expression or protease removal by gene disruption results in a large increase in thaumatin production. *Applied and Environmental Microbiology*, **2002**, 68, 3550-9	4.8	45
90	Exogenous methionine increases levels of mRNAs transcribed from pcbAB, pcbC, and cefEF genes, encoding enzymes of the cephalosporin biosynthetic pathway, in Acremonium chrysogenum. *Journal of Bacteriology*, **1994**, 176, 985-91	3.5	45
89	Expression of the penDE gene of Penicillium chrysogenum encoding isopenicillin N acyltransferase in Cephalosporium acremonium: production of benzylpenicillin by the transformants. *Molecular Genetics and Genomics*, **1991**, 225, 56-64		45
88	Thaumatin production in Aspergillus awamori by use of expression cassettes with strong fungal promoters and high gene dosage. *Applied and Environmental Microbiology*, **1999**, 65, 1168-74	4.8	45
87	Novel aspinolide production by Trichoderma arundinaceum with a potential role in Botrytis cinerea antagonistic activity and plant defence priming. *Environmental Microbiology*, **2015**, 17, 1103-18	5.2	39
86	Stable transformants of the azaphilone pigment-producing Monascus purpureus obtained by protoplast transformation and Agrobacterium-mediated DNA transfer. *Current Genetics*, **2003**, 43, 447-52	2.9	39

85	Phylogenomic Analysis of a 55.1-kb 19-Gene Dataset Resolves a Monophyletic that Includes the Species Complex. *Phytopathology*, **2021**, 111, 1064-1079	3.8	39
84	A comparison of the phenotypic and genetic stability of recombinant Trichoderma spp. generated by protoplast- and Agrobacterium-mediated transformation. *Journal of Microbiology*, **2006**, 44, 383-95	3	39
83	Targeted inactivation of the mecB gene, encoding cystathionine-gamma-lyase, shows that the reverse transsulfuration pathway is required for high-level cephalosporin biosynthesis in Acremonium chrysogenum C10 but not for methionine induction of the cephalosporin genes. *Journal of Bacteriology*, **2001**, 183, 1765-72	3.5	38
82	Secondary Metabolism and Antimicrobial Metabolites of Trichoderma **2014**, 125-137		37
81	Screening of antimicrobial activities in Trichoderma isolates representing three trichoderma sections. *Mycological Research*, **2005**, 109, 1397-406		37
80	Resolution of chromosomes III and VI of Aspergillus nidulans by pulsed-field gel electrophoresis shows that the penicillin biosynthetic pathway genes pcbAB, pcbC, and penDE are clustered on chromosome VI (3.0 megabases). *Journal of Bacteriology*, **1992**, 174, 7063-7	3.5	37
79	Overexpression of the Trichoderma brevicompactum tri5 gene: effect on the expression of the trichodermin biosynthetic genes and on tomato seedlings. *Toxins*, **2011**, 3, 1220-32	4.9	36
78	The heterologous overexpression of hsp23, a small heat-shock protein gene from Trichoderma virens, confers thermotolerance to T. harzianum. *Current Genetics*, **2007**, 52, 45-53	2.9	35
77	Characterization and nitrogen-source regulation at the transcriptional level of the gdhA gene of Aspergillus awamori encoding an NADP-dependent glutamate dehydrogenase. *Current Genetics*, **1998**, 34, 50-9	2.9	34
76	ThPTR2, a di/tri-peptide transporter gene from Trichoderma harzianum. *Fungal Genetics and Biology*, **2006**, 43, 234-46	3.9	34
75	Detection of putative peptide synthetase genes in Trichoderma species: application of this method to the cloning of a gene from T. harzianum CECT 2413. *FEMS Microbiology Letters*, **2005**, 244, 139-48	2.9	34
74	Transcription of the pcbAB, pcbC and penDE genes of Penicillium chrysogenum AS-P-78 is repressed by glucose and the repression is not reversed by alkaline pHs. *Microbiology (United Kingdom)*, **1999**, 145 (Pt 2), 317-324	2.9	34
73	Genes for beta-lactam antibiotic biosynthesis. *Antonie Van Leeuwenhoek*, **1995**, 67, 181-200	2.1	34
72	Intrachromosomal recombination between direct repeats in Penicillium chrysogenum: gene conversion and deletion events. *Molecular Genetics and Genomics*, **1999**, 261, 994-1000		31
71	Trichodiene Production in a Trichoderma harzianum erg1-Silenced Strain Provides Evidence of the Importance of the Sterol Biosynthetic Pathway in Inducing Plant Defense-Related Gene Expression. *Molecular Plant-Microbe Interactions*, **2015**, 28, 1181-97	3.6	29
70	A novel heptameric sequence (TTAGTAA) is the binding site for a protein required for high level expression of pcbAB, the first gene of the penicillin biosynthesis in Penicillium chrysogenum. *Journal of Biological Chemistry*, **2000**, 275, 2423-30	5.4	29
69	Development of a qPCR Strategy to Select Bean Genes Involved in Plant Defense Response and Regulated by the Trichoderma velutinum - Rhizoctonia solani Interaction. *Frontiers in Plant Science*, **2016**, 7, 1109	6.2	29
68	Characterization of the lys2 gene of Penicillium chrysogenum encoding alpha-aminoadipic acid reductase. *Molecular Genetics and Genomics*, **1998**, 259, 549-56		28

67	Overexpression and lack of degradation of thaumatin in an aspergillopepsin A-defective mutant of Aspergillus awamori containing an insertion in the pepA gene. *Applied Microbiology and Biotechnology*, **2000**, 54, 772-7	5.7	28
66	Effects of Trichothecene Production on the Plant Defense Response and Fungal Physiology: Overexpression of the Trichoderma arundinaceum tri4 Gene in T. harzianum. *Applied and Environmental Microbiology*, **2015**, 81, 6355-66	4.8	26
65	Cloning and characterization of the Thcut1 gene encoding a cutinase of Trichoderma harzianum T34. *Current Genetics*, **2008**, 54, 301-12	2.9	25
64	Expression of a synthetic copy of the bovine chymosin gene in Aspergillus awamori from constitutive and pH-regulated promoters and secretion using two different pre-pro sequences. *Biotechnology and Bioengineering*, **2003**, 83, 249-59	4.9	25
63	Involvement of Epl-1 Protein in the Regulation of Virulence- and Tomato Defense-Related Genes. *Frontiers in Plant Science*, **2017**, 8, 880	6.2	24
62	The importance of chorismate mutase in the biocontrol potential of Trichoderma parareesei. *Frontiers in Microbiology*, **2015**, 6, 1181	5.7	24
61	Molecular characterization of the Acremonium chrysogenum cefG gene product: the native deacetylcephalosporin C acetyltransferase is not processed into subunits. *Biochemical Journal*, **1999**, 337, 379-385	3.8	23
60	Molecular characterization of three loss-of-function mutations in the isopenicillin N-acyltransferase gene (penDE) of Penicillium chrysogenum. *Journal of Bacteriology*, **1994**, 176, 4941-8	3.5	22
59	Characterization and lysine control of expression of the lys1 gene of Penicillium chrysogenum encoding homocitrate synthase. *Gene*, **1999**, 226, 51-9	3.8	20
58	Inhibitory activity of Beauveria bassiana and Trichoderma spp. on the insect pests Xylotrechus arvicola (Coleoptera: Cerambycidae) and Acanthoscelides obtectus (Coleoptera: Chrisomelidae: Bruchinae). *Environmental Monitoring and Assessment*, **2017**, 189, 12	3.1	19
57	Overexpression of erg1 gene in Trichoderma harzianum CECT 2413: effect on the induction of tomato defence-related genes. *Journal of Applied Microbiology*, **2014**, 117, 812-23	4.7	19
56	Nitrogen Metabolism and Growth Enhancement in Tomato Plants Challenged with Trichoderma harzianum Expressing the Aspergillus nidulans Acetamidase amdS Gene. *Frontiers in Microbiology*, **2016**, 7, 1182	5.7	19
55	Effect of trichodiene production by Trichoderma harzianum on Acanthoscelides obtectus. *Journal of Stored Products Research*, **2018**, 77, 231-239	2.5	19
54	Effect of deletion of a trichothecene toxin regulatory gene on the secondary metabolism transcriptome of the saprotrophic fungus Trichoderma arundinaceum. *Fungal Genetics and Biology*, **2018**, 119, 29-46	3.9	18
53	Characterization of the bip gene of Aspergillus awamori encoding a protein with an HDEL retention signal homologous to the mammalian BiP involved in polypeptide secretion. *Current Genetics*, **1997**, 32, 139-46	2.9	18
52	The isopenicillin N acyltransferases of Aspergillus nidulans and Penicillium chrysogenum differ in their ability to maintain the 40-kDa alphabeta heterodimer in an undissociated form. *FEBS Journal*, **2003**, 270, 1958-68		18
51	Effect of and on the Metabolome of Bean Plants (L.). *International Journal of Molecular Sciences*, **2019**, 20,	6.3	17
50	Detection of peptaibols and partial cloning of a putative peptaibol synthetase gene from T. harzianum CECT 2413. *Folia Microbiologica*, **2006**, 51, 114-20	2.8	17

49	TvDim1 of Trichoderma virens is involved in redox-processes and confers resistance to oxidative stresses. *Current Genetics*, **2010**, 56, 63-73	2.9	16
48	Three genes hrdB, hrdD and hrdT of Streptomyces griseus IMRU 3570, encoding sigma factor-like proteins, are differentially expressed under specific nutritional conditions. *Gene*, **1995**, 153, 41-8	3.8	16
47	Trichothecenes and aspinolides produced by Trichoderma arundinaceum regulate expression of Botrytis cinerea genes involved in virulence and growth. *Environmental Microbiology*, **2016**, 18, 3991-4004	5.2	16
46	Overexpression of the lys1 gene in Penicillium chrysogenum: homocitrate synthase levels, alpha-aminoadipic acid pool and penicillin production. *Applied Microbiology and Biotechnology*, **2000** , 54, 69-77	5.7	14
45	Cloning and characterization of the gene cahB encoding a cephalosporin C acetylhydrolase from Acremonium chrysogenum. *Applied Microbiology and Biotechnology*, **2001**, 57, 350-6	5.7	13
44	Expression of genes and processing of enzymes for the biosynthesis of penicillins and cephalosporins. *Antonie Van Leeuwenhoek*, **1994**, 65, 227-43	2.1	13
43	Colonization of L. by the Endophyte sp. Strain T154: Biocontrol Activity Against. *Frontiers in Plant Science*, **2020**, 11, 1170	6.2	13
42	Investigations of Trichoderma spp. and Beauveria bassiana as biological control agent for Xylotrechus arvicola, a major insect pest in Spanish vineyards. *Journal of Economic Entomology*, **2018**, 111, 2585-2591	2.2	13
41	Genome-wide analysis of differentially expressed genes from Penicillium chrysogenum grown with a repressing or a non-repressing carbon source. *Current Genetics*, **2006**, 49, 85-96	2.9	12
40	Botrydial and botcinins produced by Botrytis cinerea regulate the expression of Trichoderma arundinaceum genes involved in trichothecene biosynthesis. *Molecular Plant Pathology*, **2016**, 17, 1017-31	5.7	12
39	Role of Trichoderma arundinaceum tri10 in regulation of terpene biosynthetic genes and in control of metabolic flux. *Fungal Genetics and Biology*, **2019**, 122, 31-46	3.9	12
38	Involvement of the Transcriptional Coactivator ThMBF1 in the Biocontrol Activity of. *Frontiers in Microbiology*, **2017**, 8, 2273	5.7	11
37	Relevance of the deletion of the Tatri4 gene in the secondary metabolome of Trichoderma arundinaceum. *Organic and Biomolecular Chemistry*, **2018**, 16, 2955-2965	3.9	10
36	Subcellular localization of the homocitrate synthase in Penicillium chrysogenum. *Molecular Genetics and Genomics*, **2002**, 266, 711-9	3.1	10
35	Characterization of the reverse transsulfuration gene mecB of Acremonium chrysogenum, which encodes a functional cystathionine-gamma-lyase. *Molecular Genetics and Genomics*, **2001**, 264, 746-54	3.1	10
34	Identification of plant genes putatively involved in the perception of fungal ergosterol-squalene. *Journal of Integrative Plant Biology*, **2020**, 62, 927-947	8.3	9
33	A cytochrome P450 monooxygenase gene required for biosynthesis of the trichothecene toxin harzianum A in Trichoderma. *Applied Microbiology and Biotechnology*, **2019**, 103, 8087-8103	5.7	8
32	Molecular characterization of the Acremonium chrysogenum cefG gene product: the native deacetylcephalosporin C acetyltransferase is not processed into subunits. *Biochemical Journal*, **1999**, 337, 379	3.8	8

31	Requirement of Two Acyltransferases for 4- O-Acylation during Biosynthesis of Harzianum A, an Antifungal Trichothecene Produced by Trichoderma arundinaceum. *Journal of Agricultural and Food Chemistry*, **2019**, 67, 723-734	5.7	8
30	Genetic bases for variation in structure and biological activity of trichothecene toxins produced by diverse fungi. *Applied Microbiology and Biotechnology*, **2020**, 104, 5185-5199	5.7	7
29	Mutants blocked in penicillin biosynthesis show a deletion of the entire penicillin gene cluster at a specific site within a conserved hexanucleotide sequence **1996**, 44, 597		7
28	Effect of trichodiene synthase encoding gene expression in Trichoderma strains on their effectiveness in the control of Acanthoscelides obtectus. *Journal of Stored Products Research*, **2019**, 83, 275-280	2.5	6
27	Co-transformation with autonomous replicating and integrative plasmids in Penicillium chrysogenum is highly efficient and leads in some cases to rescue of the intact integrative plasmid. *Fungal Genetics and Biology*, **2003**, 40, 83-92	3.9	6
26	Influence of Fungicide Application and Vine Age on Trichoderma Diversity as Source of Biological Control Agents. *Agronomy*, **2021**, 11, 446	3.6	5
25	Influence of Physicochemical Characteristics of Bean Crop Soil in Trichoderma spp. Development. *Agronomy*, **2021**, 11, 274	3.6	5
24	The specific transport system for lysine is fully inhibited by ammonium in Penicillium chrysogenum: an ammonium-insensitive system allows uptake in carbon-starved cells. *Antonie Van Leeuwenhoek*, **2000**, 77, 91-100	2.1	4
23	Characterization of the gdhA gene from the phytopathogen Botrytis cinerea. *Fungal Genetics and Biology*, **2001**, 34, 193-206	3.9	4
22	Spores of Trichoderma strains sprayed over Acanthoscelides obtectus and Phaseolus vulgaris L. beans: Effects in the biology of the bean weevil. *Journal of Stored Products Research*, **2020**, 88, 101666	2.5	4
21	Volatile Organic Compound Chamber: A Novel Technology for Microbiological Volatile Interaction Assays. *Journal of Fungi (Basel, Switzerland)*, **2021**, 7,	5.6	4
20	Use of the volatile trichodiene to reduce Fusarium head blight and trichothecene contamination in wheat. *Microbial Biotechnology*, **2021**,	6.3	4
19	Evaluation of substrates and additives to Trichoderma harzianum development by qPCR. *Agronomy Journal*, **2020**, 112, 3188-3194	2.2	3
18	Fungal Horizontal Gene Transfer: A History Beyond the Phylogenetic Kingdoms **2019**, 315-336		3
17	Synthesis of Trichodermin Derivatives and Their Antimicrobial and Cytotoxic Activities. *Molecules*, **2019**, 24,	4.8	3
16	Autonomously replicating plasmids carrying theAMA1 region inPenicillium chrysogenum **1996**, 29, 482		3
15	Trichoderma trichothecenes **2020**, 281-301		3
14	The Influence of Temperature on the Growth, Sporulation, Colonization, and Survival of Trichoderma spp. in Grapevine Pruning Wounds. *Agronomy*, **2021**, 11, 1771	3.6	3

13	Trichoderma Transformation Methods. *Fungal Biology*, **2015**, 41-48	2.3	2
12	Intrachromosomal recombination after targeted monocopy integration in Penicillium chrysogenum: stabilization of the direct repeats to prevent loss of the inserted gene. *Current Genetics*, **2001**, 39, 231-6	2.9	2
11	Insecticidal activity of Trichoderma harzianum against Xylotrechus arvicola and Acanthoscelides obtectus inmature stages. *Planta Medica*, **2016**, 81, S1-S381	3.1	2
10	Volatile-mediated interactions between Trichoderma harzianum and Acanthoscelides obtectus: A novel in vitro methodology to evaluate the impact of microbial volatile compounds on dry grain storage pests. *Biological Control*, **2022**, 169, 104868	3.8	2
9	Molecular genetics as a tool to remove bottlenecks in the biosynthesis of β-lactam antibiotics. *World Journal of Microbiology and Biotechnology*, **1996**, 12, 517-23	4.4	1
8	Effect of Farnesol, a compound produced by Trichoderma when growing on bean (Phaseolus vulgaris L.). *Planta Medica*, **2016**, 81, S1-S381	3.1	1
7	Novel culture chamber to evaluate in vitro plant-microbe volatile interactions: effects of Trichoderma harzianum volatiles on wheat plantlets. *Plant Science*, **2022**, 111286	5.3	1
6	Distribution, Function, and Evolution of a Gene Essential for Trichothecene Toxin Biosynthesis in .. *Frontiers in Microbiology*, **2021**, 12, 791641	5.7	0
5	Influence of Substrates in the Development of Bean and in Pathogenicity of Rhizoctonia solani JG Kühn. *Agronomy*, **2020**, 10, 707	3.6	0
4	Organic and Conventional Bean Pesticides in Development of Autochthonous Trichoderma Strains. *Journal of Fungi (Basel, Switzerland)*, **2022**, 8, 603	5.6	0
3	Germination and Agronomic Traits of Phaseolus vulgaris L. Beans Sprayed with Trichoderma Strains and Attacked by Acanthoscelides obtectus. *Agronomy*, **2021**, 11, 2130	3.6	
2	Fungal Secondary Metabolism **2021**, 54-63		
1	Use of VOC Chambers to evaluate the impact of microbial volatile compounds on dry grain insect pests. *MethodsX*, **2022**, 9, 101734	1.9	