

Christoph Keel

List of Publications by Year in descending order

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96
papers

10,343
citations

36303

51
h-index

40979

93
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100
all docs

100
docs citations

100
times ranked

6918
citing authors

#	ARTICLE	IF	CITATIONS
1	REGULATION OF ANTIBIOTIC PRODUCTION IN ROOT-COLONIZING PSEUDOMONAS SPP. AND RELEVANCE FOR BIOLOGICAL CONTROL OF PLANT DISEASE. Annual Review of Phytopathology, 2003, 41, 117-153.	7.8	727
2	Cyanide production by <i>Pseudomonas fluorescens</i> helps suppress black root rot of tobacco under gnotobiotic conditions. EMBO Journal, 1989, 8, 351-358.	7.8	528
3	Suppression of Root Diseases by <i>Pseudomonas fluorescens</i> CHAO: Importance of the Bacterial Secondary Metabolite 2,4-Diacetylphloroglucinol. Molecular Plant-Microbe Interactions, 1992, 5, 4.	2.6	513
4	Signaling in the Rhizosphere. Trends in Plant Science, 2016, 21, 187-198.	8.8	465
5	Global control in <i>Pseudomonas fluorescens</i> mediating antibiotic synthesis and suppression of black root rot of tobacco. Proceedings of the National Academy of Sciences of the United States of America, 1992, 89, 1562-1566.	7.1	388
6	Taking the Fungal Highway: Mobilization of Pollutant-Degrading Bacteria by Fungi. Environmental Science & Technology, 2005, 39, 4640-4646.	10.0	367
7	Small, Stable Shuttle Vectors Based on the Minimal pVS1 Replicon for Use in Gram-Negative, Plant-Associated Bacteria. Molecular Plant-Microbe Interactions, 2000, 13, 232-237.	2.6	356
8	Biocontrol by Phenazine-1-carboxamide-Producing <i>Pseudomonas chlororaphis</i> PCL1391 of Tomato Root Rot Caused by <i>Fusarium oxysporum</i> f. sp. <i>radicis-lycopersici</i> . Molecular Plant-Microbe Interactions, 1998, 11, 1069-1077.	2.6	311
9	Autoinduction of 2,4-Diacetylphloroglucinol Biosynthesis in the Biocontrol Agent <i>Pseudomonas fluorescens</i> CHAO and Repression by the Bacterial Metabolites Salicylate and Pyoluteorin. Journal of Bacteriology, 2000, 182, 1215-1225.	2.2	310
10	Conservation of the 2,4-diacetylphloroglucinol biosynthesis locus among fluorescent <i>Pseudomonas</i> strains from diverse geographic locations. Applied and Environmental Microbiology, 1996, 62, 552-563.	3.1	270
11	Genetically programmed autoinducer destruction reduces virulence gene expression and swarming motility in <i>Pseudomonas aeruginosa</i> PAO1 The GenBank accession number for the <i>aiiA</i> nucleotide sequence is AF397400. The GenBank accession numbers for the 16S rRNA genes of strains A23 and A24 are AF397398 and AF397399. Microbiology (United Kingdom), 2002, 148, 923-932.	1.8	239
12	Characterisation of microbial communities colonising the hyphal surfaces of arbuscular mycorrhizal fungi. ISME Journal, 2010, 4, 752-763.	9.8	215
13	RsmY, a small regulatory RNA, is required in concert with RsmZ for GacA-dependent expression of biocontrol traits in <i>Pseudomonas fluorescens</i> CHAO. Molecular Microbiology, 2003, 50, 1361-1379.	2.5	199
14	Characterization of the <i>hcnABC</i> Gene Cluster Encoding Hydrogen Cyanide Synthase and Anaerobic Regulation by ANR in the Strictly Aerobic Biocontrol Agent <i>Pseudomonas fluorescens</i> CHAO. Journal of Bacteriology, 1998, 180, 3187-3196.	2.2	199
15	Influence of plant species on disease suppression by <i>Pseudomonas fluorescens</i> strain CHAO with enhanced antibiotic production. Plant Pathology, 1995, 44, 40-50.	2.4	191
16	Amplification of the housekeeping sigma factor in <i>Pseudomonas fluorescens</i> CHAO enhances antibiotic production and improves biocontrol abilities. Journal of Bacteriology, 1995, 177, 5387-5392.	2.2	179
17	Role of Gluconic Acid Production in the Regulation of Biocontrol Traits of <i>Pseudomonas fluorescens</i> CHAO. Applied and Environmental Microbiology, 2009, 75, 4162-4174.	3.1	178
18	Cyanide production by <i>Pseudomonas fluorescens</i> helps suppress black root rot of tobacco under gnotobiotic conditions. EMBO Journal, 1989, 8, 351-8.	7.8	176

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19	Promise for plant pest control: root-associated pseudomonads with insecticidal activities. <i>Frontiers in Plant Science</i> , 2013, 4, 287.	3.6	158
20	Iron Sufficiency, a Prerequisite for the Suppression of Tobacco Black Root Rot by <i>Pseudomonas fluorescens</i> Strain CHAO under Gnotobiotic Conditions. <i>Phytopathology</i> , 1989, 79, 584.	2.2	146
21	Molecular analysis of a novel gene cluster encoding an insect toxin in plant-associated strains of <i>Pseudomonas fluorescens</i> . <i>Environmental Microbiology</i> , 2008, 10, 2368-2386.	3.8	145
22	GacS Sensor Domains Pertinent to the Regulation of Exoproduct Formation and to the Biocontrol Potential of <i>Pseudomonas fluorescens</i> CHAO. <i>Molecular Plant-Microbe Interactions</i> , 2003, 16, 634-644.	2.6	139
23	Insect pathogenicity in plant-beneficial pseudomonads: phylogenetic distribution and comparative genomics. <i>ISME Journal</i> , 2016, 10, 2527-2542.	9.8	127
24	The Sigma Factor AlgU (AlgT) Controls Exopolysaccharide Production and Tolerance towards Desiccation and Osmotic Stress in the Biocontrol Agent <i>Pseudomonas fluorescens</i> CHAO. <i>Applied and Environmental Microbiology</i> , 2001, 67, 5683-5693.	3.1	123
25	Predators promote defence of rhizosphere bacterial populations by selective feeding on non-toxic cheaters. <i>ISME Journal</i> , 2009, 3, 666-674.	9.8	122
26	Association of Hemolytic Activity of <i>Pseudomonas entomophila</i> , a Versatile Soil Bacterium, with Cyclic Lipopeptide Production. <i>Applied and Environmental Microbiology</i> , 2010, 76, 910-921.	3.1	121
27	Plants Respond to Pathogen Infection by Enhancing the Antifungal Gene Expression of Root-Associated Bacteria. <i>Molecular Plant-Microbe Interactions</i> , 2011, 24, 352-358.	2.6	109
28	Biocontrol ability of fluorescent pseudomonads genetically dissected: importance of positive feedback regulation. <i>Current Opinion in Biotechnology</i> , 2000, 11, 290-297.	6.6	106
29	Potential Role of Pathogen Signaling in Multitrophic Plant-Microbe Interactions Involved in Disease Protection. <i>Applied and Environmental Microbiology</i> , 2004, 70, 1836-1842.	3.1	103
30	Is the ability of biocontrol fluorescent pseudomonads to produce the antifungal metabolite 2,4-diacetylphloroglucinol really synonymous with higher plant protection?. <i>New Phytologist</i> , 2007, 173, 861-872.	7.3	98
31	Use of green fluorescent protein-based reporters to monitor balanced production of antifungal compounds in the biocontrol agent <i>Pseudomonas fluorescens</i> CHAO. <i>Journal of Applied Microbiology</i> , 2005, 99, 24-38.	3.1	94
32	Contribution of the Global Regulator Gene <i>gacA</i> to Persistence and Dissemination of <i>Pseudomonas fluorescens</i> Biocontrol Strain CHAO Introduced into Soil Microcosms. <i>Applied and Environmental Microbiology</i> , 1994, 60, 2553-2560.	3.1	91
33	Importance of Preferential Flow and Soil Management in Vertical Transport of a Biocontrol Strain of <i>Pseudomonas fluorescens</i> in Structured Field Soil. <i>Applied and Environmental Microbiology</i> , 1996, 62, 33-40.	3.1	89
34	Temporally distinct accumulation of transcripts encoding enzymes of the prechormate pathway in elicitor-treated, cultured tomato cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995, 92, 3166-3170.	7.1	87
35	Cross Talk between 2,4-Diacetylphloroglucinol-Producing Biocontrol Pseudomonads on Wheat Roots. <i>Applied and Environmental Microbiology</i> , 2004, 70, 1990-1998.	3.1	87
36	Antimicrobial and Insecticidal: Cyclic Lipopeptides and Hydrogen Cyanide Produced by Plant-Beneficial <i>Pseudomonas</i> Strains CHAO, CMR12a, and PCL1391 Contribute to Insect Killing. <i>Frontiers in Microbiology</i> , 2017, 8, 100.	3.5	84

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37	Small RNA-dependent Expression of Secondary Metabolism Is Controlled by Krebs Cycle Function in <i>Pseudomonas fluorescens</i> . <i>Journal of Biological Chemistry</i> , 2009, 284, 34976-34985.	3.4	82
38	Tn5-directed cloning of pqq genes from <i>Pseudomonas fluorescens</i> CHAO: mutational inactivation of the genes results in overproduction of the antibiotic pyoluteorin. <i>Applied and Environmental Microbiology</i> , 1995, 61, 3856-3864.	3.1	82
39	Oral insecticidal activity of plant-associated pseudomonads. <i>Environmental Microbiology</i> , 2013, 15, 751-763.	3.8	80
40	T6SS contributes to gut microbiome invasion and killing of an herbivorous pest insect by plant-beneficial <i>Pseudomonas protegens</i> . <i>ISME Journal</i> , 2019, 13, 1318-1329.	9.8	76
41	Characterization of PhIG, a Hydrolase That Specifically Degrades the Antifungal Compound 2,4-Diacetylphloroglucinol in the Biocontrol Agent <i>Pseudomonas fluorescens</i> CHAO. <i>Applied and Environmental Microbiology</i> , 2006, 72, 418-427.	3.1	74
42	Predator-Prey Chemical Warfare Determines the Expression of Biocontrol Genes by Rhizosphere-Associated <i>Pseudomonas fluorescens</i> . <i>Applied and Environmental Microbiology</i> , 2010, 76, 5263-5268.	3.1	73
43	Signal transduction in plant-beneficial rhizobacteria with biocontrol properties. <i>Antonie Van Leeuwenhoek</i> , 2002, 81, 385-395.	1.7	72
44	Characterization of spontaneous gacS and gacA regulatory mutants of <i>Pseudomonas fluorescens</i> biocontrol strain CHAO. <i>Antonie Van Leeuwenhoek</i> , 2001, 79, 327-336.	1.7	70
45	Bacterial Subfamily of LuxR Regulators That Respond to Plant Compounds. <i>Applied and Environmental Microbiology</i> , 2011, 77, 4579-4588.	3.1	68
46	Dialogues of root-colonizing biocontrol pseudomonads. <i>European Journal of Plant Pathology</i> , 2007, 119, 311-328.	1.7	62
47	Pyroloquinoline Quinone Biosynthesis Gene <i>pqqC</i> , a Novel Molecular Marker for Studying the Phylogeny and Diversity of Phosphate-Solubilizing Pseudomonads. <i>Applied and Environmental Microbiology</i> , 2011, 77, 7345-7354.	3.1	62
48	Combination of Fluorescent Reporters for Simultaneous Monitoring of Root Colonization and Antifungal Gene Expression by a Biocontrol Pseudomonad on Cereals with Flow Cytometry. <i>Molecular Plant-Microbe Interactions</i> , 2010, 23, 949-961.	2.6	61
49	Enhanced production of indole-3-acetic acid by a genetically modified strain of <i>Pseudomonas fluorescens</i> CHAO affects root growth of cucumber, but does not improve protection of the plant against <i>Pythium</i> root rot. <i>FEMS Microbiology Ecology</i> , 1999, 28, 225-233.	2.7	58
50	Interplay between Wheat Cultivars, Biocontrol Pseudomonads, and Soil. <i>Applied and Environmental Microbiology</i> , 2010, 76, 6196-6204.	3.1	55
51	Predominance of Nonculturable Cells of the Biocontrol Strain <i>Pseudomonas fluorescens</i> CHAO in the Surface Horizon of Large Outdoor Lysimeters. <i>Applied and Environmental Microbiology</i> , 1997, 63, 3776-3782.	3.1	55
52	Characterization of the surface hydrophobicity of filamentous fungi. <i>Environmental Microbiology</i> , 2003, 5, 85-91.	3.8	54
53	RpoN (If54) Controls Production of Antifungal Compounds and Biocontrol Activity in <i>Pseudomonas fluorescens</i> CHAO. <i>Molecular Plant-Microbe Interactions</i> , 2005, 18, 260-272.	2.6	54
54	Full-Genome Sequence of the Plant Growth-Promoting Bacterium <i>Pseudomonas protegens</i> CHAO. <i>Genome Announcements</i> , 2014, 2, .	0.8	53

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55	Interactions between the biocontrol agent <i>Pseudomonas fluorescens</i> CHA0 and <i>Thielaviopsis basicola</i> in tobacco roots observed by immunofluorescence microscopy. <i>Plant Pathology</i> , 1997, 46, 62-71.	2.4	52
56	Deleterious Impact of a Virulent Bacteriophage on Survival and Biocontrol Activity of <i>Pseudomonas fluorescens</i> Strain CHA0 in Natural Soil. <i>Molecular Plant-Microbe Interactions</i> , 2002, 15, 567-576.	2.6	52
57	Heavy metal tolerant <i>Pseudomonas protegens</i> isolates from agricultural well water in northeastern Algeria with plant growth promoting, insecticidal and antifungal activities. <i>European Journal of Soil Biology</i> , 2016, 75, 38-46.	3.2	52
58	Detection of Plant-Modulated Alterations in Antifungal Gene Expression in <i>Pseudomonas fluorescens</i> CHA0 on Roots by Flow Cytometry. <i>Applied and Environmental Microbiology</i> , 2008, 74, 1339-1349.	3.1	51
59	Control and host-dependent activation of insect toxin expression in a root-associated biocontrol pseudomonad. <i>Environmental Microbiology</i> , 2013, 15, 736-750.	3.8	47
60	Evolutionary patchwork of an insecticidal toxin shared between plant-associated pseudomonads and the insect pathogens <i>Photorhabdus</i> and <i>Xenorhabdus</i> . <i>BMC Genomics</i> , 2015, 16, 609.	2.8	46
61	Spatially Restricted Immune Responses Are Required for Maintaining Root Meristematic Activity upon Detection of Bacteria. <i>Current Biology</i> , 2021, 31, 1012-1028.e7.	3.9	46
62	Influence of biocontrol strain <i>Pseudomonas fluorescens</i> CHA0 and its antibiotic overproducing derivative on the diversity of resident root colonizing pseudomonads. <i>FEMS Microbiology Ecology</i> , 1997, 23, 341-352.	2.7	45
63	Combined Field Inoculations of <i>Pseudomonas</i> Bacteria, Arbuscular Mycorrhizal Fungi, and Entomopathogenic Nematodes and their Effects on Wheat Performance. <i>Frontiers in Plant Science</i> , 2017, 8, 1809.	3.6	45
64	Impact of <i>Pseudomonas fluorescens</i> strain CHA0 and a derivative with improved biocontrol activity on the culturable resident bacterial community on cucumber roots. <i>FEMS Microbiology Ecology</i> , 1998, 27, 365-380.	2.7	44
65	Two Novel MvaT-Like Global Regulators Control Exoproduct Formation and Biocontrol Activity in Root-Associated <i>Pseudomonas fluorescens</i> CHA0. <i>Molecular Plant-Microbe Interactions</i> , 2006, 19, 313-329.	2.6	44
66	Plant- and Microbe-Derived Compounds Affect the Expression of Genes Encoding Antifungal Compounds in a <i>Pseudomonad</i> with Biocontrol Activity. <i>Applied and Environmental Microbiology</i> , 2011, 77, 2807-2812.	3.1	44
67	Domain Shuffling in a Sensor Protein Contributed to the Evolution of Insect Pathogenicity in Plant-Beneficial <i>Pseudomonas protegens</i> . <i>PLoS Pathogens</i> , 2014, 10, e1003964.	4.7	41
68	Transcriptome plasticity underlying plant root colonization and insect invasion by <i>Pseudomonas protegens</i> . <i>ISME Journal</i> , 2020, 14, 2766-2782.	9.8	38
69	Relationships between Root Pathogen Resistance, Abundance and Expression of <i>Pseudomonas</i> Antimicrobial Genes, and Soil Properties in Representative Swiss Agricultural Soils. <i>Frontiers in Plant Science</i> , 2017, 8, 427.	3.6	37
70	The global regulator GacA of <i>Pseudomonas fluorescens</i> CHA0 is required for suppression of root diseases in dicotyledons but not in Gramineae. <i>Plant Pathology</i> , 1997, 46, 80-90.	2.4	36
71	Persistence of root-colonizing <i>Pseudomonas protegens</i> in herbivorous insects throughout different developmental stages and dispersal to new host plants. <i>ISME Journal</i> , 2019, 13, 860-872.	9.8	35
72	Live cell dynamics of production, explosive release and killing activity of phage tail-like weapons for <i>Pseudomonas</i> kin exclusion. <i>Communications Biology</i> , 2021, 4, 87.	4.4	34

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73	Protecting maize from rootworm damage with the combined application of arbuscular mycorrhizal fungi, <i>Pseudomonas</i> bacteria and entomopathogenic nematodes. <i>Scientific Reports</i> , 2019, 9, 3127.	3.3	33
74	Persistence of a biocontrol <i>Pseudomonas</i> inoculant as high populations of culturable and non-culturable cells in 200-cm-deep soil profiles. <i>Soil Biology and Biochemistry</i> , 2012, 44, 122-129.	8.8	31
75	A look into the toolbox of multi-talents: insect pathogenicity determinants of plant-beneficial pseudomonads. <i>Environmental Microbiology</i> , 2016, 18, 3207-3209.	3.8	26
76	Transport of a biocontrol <i>Pseudomonas fluorescens</i> through 2.5-M deep outdoor lysimeters and survival in the effluent water. <i>Soil Biology and Biochemistry</i> , 1998, 30, 621-631.	8.8	23
77	Root-colonizing bacteria enhance the levels of (E)- β -caryophyllene produced by maize roots in response to rootworm feeding. <i>Oecologia</i> , 2018, 187, 459-468.	2.0	23
78	Functional GacS in <i>Pseudomonas</i> DSS73 prevents digestion by <i>Caenorhabditis elegans</i> and protects the nematode from killer flagellates. <i>ISME Journal</i> , 2009, 3, 770-779.	9.8	22
79	Impact of biocontrol strain <i>Pseudomonas fluorescens</i> CHA0 on rhizosphere bacteria isolated from barley (<i>Hordeum vulgare</i> L.) with special reference to Cytophaga-like bacteria. <i>Journal of Applied Microbiology</i> , 2002, 93, 1065-1074.	3.1	21
80	<i>Pseudomonads</i> as Biocontrol Agents of Diseases Caused by Soil-borne Pathogens. , 1995, , 137-148.		21
81	Does Wheat Genetically Modified for Disease Resistance Affect Root-Colonizing <i>Pseudomonads</i> and Arbuscular Mycorrhizal Fungi?. <i>PLoS ONE</i> , 2013, 8, e53825.	2.5	20
82	Specific surface glycan decorations enable antimicrobial peptide resistance in plant-beneficial pseudomonads with insect-pathogenic properties. <i>Environmental Microbiology</i> , 2016, 18, 4265-4281.	3.8	19
83	The secret life of plant-beneficial rhizosphere bacteria: insects as alternative hosts. <i>Environmental Microbiology</i> , 2022, 24, 3273-3289.	3.8	19
84	Pivotal role of O-antigenic polysaccharide display in the sensitivity against phage tail-like particles in environmental <i>Pseudomonas</i> kin competition. <i>ISME Journal</i> , 2022, 16, 1683-1693.	9.8	16
85	Inactivation of the Regulatory Gene <i>algU</i> or <i>gacA</i> Can Affect the Ability of Biocontrol <i>Pseudomonas fluorescens</i> CHA0 To Persist as Culturable Cells in Nonsterile Soil. <i>Applied and Environmental Microbiology</i> , 2002, 68, 2085-2088.	3.1	14
86	Biocontrol strain <i>Pseudomonas fluorescens</i> CHA0 and its genetically modified derivative with enhanced biocontrol capability exert comparable effects on the structure of a <i>Sinorhizobium meliloti</i> population in gnotobiotic systems. <i>Biology and Fertility of Soils</i> , 1997, 25, 240-244.	4.3	13
87	Phylogenetically closely related pseudomonads isolated from arthropods exhibit differential insect-killing abilities and genetic variations in insecticidal factors. <i>Environmental Microbiology</i> , 2021, 23, 5378-5394.	3.8	13
88	Interspecific cooperation: enhanced growth, attachment and strain-specific distribution in biofilms through <i>Azospirillum brasilense</i> - <i>Pseudomonas protegens</i> co-cultivation. <i>FEMS Microbiology Letters</i> , 2016, 363, fnw238.	1.8	11
89	Influence of biocontrol strain <i>Pseudomonas fluorescens</i> CHA0 and its antibiotic overproducing derivative on the diversity of resident root colonizing pseudomonads. <i>FEMS Microbiology Ecology</i> , 2006, 23, 341-352.	2.7	10
90	Conservation tillage and organic farming induce minor variations in <i>Pseudomonas</i> abundance, their antimicrobial function and soil disease resistance. <i>FEMS Microbiology Ecology</i> , 2018, 94, .	2.7	10

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91	Updated Genome Sequence and Annotation for the Full Genome of <i>Pseudomonas protegens</i> CHA0. <i>Microbiology Resource Announcements</i> , 2019, 8, .	0.6	5
92	Impact of <i>Pseudomonas fluorescens</i> strain CHA0 and a derivative with improved biocontrol activity on the culturable resident bacterial community on cucumber roots. <i>FEMS Microbiology Ecology</i> , 1998, 27, 365-380.	2.7	4
93	Genome Sequence of the <i>Pseudomonas protegens</i> Phage $\hat{1}$ GP100. <i>Genome Announcements</i> , 2018, 6, .	0.8	2
94	Draft Genome Sequence of <i>Pseudomonas</i> sp. Strain LD120, Isolated from the Marine Alga <i>Saccharina latissima</i> . <i>Microbiology Resource Announcements</i> , 2020, 9, .	0.6	1
95	Dialogues of root-colonizing biocontrol pseudomonads. , 2007, , 311-328.		0
96	Induction of Wheat Resistance to STB by the Endophytic Fungus and. <i>Iranian Journal of Biotechnology</i> , 2021, 19, e2762.	0.3	0