Appa Rao Podile

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Mineral phosphate solubilization by rhizosphere bacteria and scope for manipulation of the direct oxidation pathway involving glucose dehydrogenase. Journal of Applied Microbiology, 2010, 109, 1-12.	1.4	200
2	Plant Growth Promoting Rhizobacteria (PGPR): the bugs to debug the root zone. Critical Reviews in Microbiology, 2010, 36, 232-244.	2.7	198
3	Plant growth-promoting rhizobacteria. , 2007, , 195-230.		159
4	Biotechnological approaches to develop bacterial chitinases as a bioshield against fungal diseases of plants. Critical Reviews in Biotechnology, 2010, 30, 231-241.	5.1	134
5	Biological Control of Late Leaf Spot of Peanut (Arachis hypogaea) with Chitinolytic Bacteria. Phytopathology, 2005, 95, 1157-1165.	1.1	99
6	Biotechnological approaches for field applications of chitooligosaccharides (COS) to induce innate immunity in plants. Critical Reviews in Biotechnology, 2015, 35, 29-43.	5.1	91
7	Lysis and biological control of<i>Aspergillus niger</i>by<i>Bacillus subtilis</i>AF 1. Canadian Journal of Microbiology, 1996, 42, 533-538.	0.8	89
8	Seed Bacterization with Bacillus subtilis AF 1 Increases Phenylalanine Ammonia-lyase and Reduces the Incidence of Fusarial Wilt in Pigeonpea. Journal of Phytopathology, 1998, 146, 255-259.	0.5	78
9	Phylloplane bacteria increase seedling emergence, growth and yield of field-grown groundnut (Arachis hypogaea L.). Letters in Applied Microbiology, 2005, 40, 260-268.	1.0	71
10	Optimization of rhamnolipid biosurfactant production by mangrove sediment bacterium Pseudomonas aeruginosa KVD-HR42 using response surface methodology. Biocatalysis and Agricultural Biotechnology, 2016, 5, 38-47.	1.5	69
11	Harpin encapsulation in chitosan nanoparticles for improved bioavailability and disease resistance in tomato. Carbohydrate Polymers, 2018, 199, 11-19.	5.1	64
12	Synthesis of Long-Chain Chitooligosaccharides by a Hypertransglycosylating Processive Endochitinase of Serratia proteamaculans 568. Journal of Bacteriology, 2012, 194, 4260-4271.	1.0	63
13	Population densities of indigenous <i>Acidobacteria</i> change in the presence of plant growth promoting rhizobacteria (PGPR) in rhizosphere. Journal of Basic Microbiology, 2017, 57, 376-385.	1.8	56
14	Warriors at the gate that never sleep: Non-host resistance in plants. Journal of Plant Physiology, 2011, 168, 2141-2152.	1.6	55
15	Chitin-supplemented Foliar Application of Serratia marcescens GPS 5 Improves Control of Late Leaf Spot Disease of Groundnut by Activating Defence-related Enzymes. Journal of Phytopathology, 2005, 153, 169-173.	0.5	54
16	Chitinase A from Stenotrophomonas maltophilia shows transglycosylation and antifungal activities. Bioresource Technology, 2013, 133, 213-220.	4.8	53
17	Plant Growth-Promoting Chitinolytic Paenibacillus elgii Responds Positively to Tobacco Root Exudates. Journal of Plant Growth Regulation, 2010, 29, 409-418.	2.8	52
18	Biological control of collar rot disease with broad-spectrum antifungal bacteria associated with groundnut. Canadian Journal of Microbiology, 2005, 51, 123-132.	0.8	51

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19	Preferential Promotion of Lycopersicon esculentum (Tomato) Growth by Plant Growth Promoting Bacteria Associated with Tomato. Indian Journal of Microbiology, 2014, 54, 403-412.	1.5	51
20	Root Exudate-Induced Alterations in Bacillus cereus Cell Wall Contribute to Root Colonization and Plant Growth Promotion. PLoS ONE, 2013, 8, e78369.	1.1	50
21	Functional and molecular characterization of plant growth promoting Bacillus isolates from tomato rhizosphere. Heliyon, 2020, 6, e04734.	1.4	49
22	Chitin-supplemented formulations improve biocontrol and plant growth promoting efficiency of <i>Bacillus subtilis</i> AF 1. Canadian Journal of Microbiology, 2001, 47, 618-625.	0.8	48
23	Ethyl Methanesulfonate Mutagenesisâ€“Enhanced Mineral Phosphate Solubilization by Groundnut-Associated Serratia marcescens GPS-5. Current Microbiology, 2007, 54, 79-84.	1.0	47
24	Chitin Binding Proteins Act Synergistically with Chitinases in Serratia proteamaculans 568. PLoS ONE, 2012, 7, e36714.	1.1	47
25	Differential interactions and structural stability of chitosan oligomers with human serum albumin and Î±-1-glycoprotein. Journal of Biomolecular Structure and Dynamics, 2015, 33, 196-210.	2.0	46
26	Methylobacterium ajmalii sp. nov., Isolated From the International Space Station. Frontiers in Microbiology, 2021, 12, 639396.	1.5	46
27	Transglycosylation by Chitinase D from Serratia proteamaculans Improved through Altered Substrate Interactions. Journal of Biological Chemistry, 2012, 287, 44619-44627.	1.6	44
28	Multiple chitinases of an endophytic Serratia proteamaculans 568 generate chitin oligomers. Bioresource Technology, 2012, 112, 261-269.	4.8	43
29	Metabolites in the root exudates of groundnut change during interaction with plant growth promoting rhizobacteria in a strain-specific manner. Journal of Plant Physiology, 2019, 243, 153057.	1.6	43
30	Title is missing!. European Journal of Plant Pathology, 1998, 104, 125-132.	0.8	42
31	Whole cells of Bacillus subtilis AF 1 proved more effective than cell-free and chitinase-based formulations in biological control of citrus fruit rot and groundnut rust. Canadian Journal of Microbiology, 2004, 50, 737-744.	0.8	41
32	A new chitinase-D from a plant growth promoting Serratia marcescens GPS5 for enzymatic conversion of chitin. Bioresource Technology, 2016, 220, 200-207.	4.8	38
33	Pseudomonas aeruginosa inhibits the plant cell wall degrading enzymes of Sclerotium rolfsii and reduces the severity of groundnut stem rot. European Journal of Plant Pathology, 2005, 113, 315-320.	0.8	37
34	Fusion of cellulose binding domain to the catalytic domain improves the activity and conformational stability of chitinase in Bacillus licheniformis DSM13. Bioresource Technology, 2010, 101, 3635-3641.	4.8	37
35	Bacterial chitin binding proteins show differential substrate binding and synergy with chitinases. Microbiological Research, 2013, 168, 461-468.	2.5	37
36	Transglycosylation by a chitinase from Enterobacter cloacae subsp. cloacae generates longer chitin oligosaccharides. Scientific Reports, 2017, 7, 5113.	1.6	36

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37	Constitutive Expression of hrap Gene in Transgenic Tobacco Plant Enhances Resistance Against Virulent Bacterial Pathogens by Induction of a Hypersensitive Response. Molecular Plant-Microbe Interactions, 2002, 15, 764-773.	1.4	34
38	Increase in Seedling Emergence and Dry Weight of Pigeon Pea in the Field with Chitin-supplemented Formulations of Bacillus subtilis AF 1. World Journal of Microbiology and Biotechnology, 2005, 21, 1057-1062.	1.7	32
39	Transgenic expression of glucose dehydrogenase in <i>Azotobacter vinelandii</i> enhances mineral phosphate solubilization and growth of sorghum seedlings. Microbial Biotechnology, 2009, 2, 521-529.	2.0	32
40	Members of Gammaproteobacteria and Bacilli represent the culturable diversity of chitinolytic bacteria in chitin-enriched soils. World Journal of Microbiology and Biotechnology, 2010, 26, 1875-1881.	1.7	30
41	Production of bioactive chitosan oligosaccharides using the hypertransglycosylating chitinase-D from Serratia proteamaculans. Bioresource Technology, 2015, 198, 503-509.	4.8	26
42	Key Residues Affecting Transglycosylation Activity in Family 18 Chitinases: Insights into Donor and Acceptor Subsites. Biochemistry, 2018, 57, 4325-4337.	1.2	25
43	A carbohydrate binding module-5 is essential for oxidative cleavage of chitin by a multi-modular lytic polysaccharide monooxygenase from Bacillus thuringiensis serovar kurstaki. International Journal of Biological Macromolecules, 2019, 127, 649-656.	3.6	25
44	Root Colonization and Quorum Sensing are the Driving forces of Plant Growth Promoting Rhizobacteria (pgpr) for Growth Promotion. Proceedings of the Indian National Science Academy, 2014, 80, 407.	0.5	25
45	Catalytic Efficiency of Chitinase-D on Insoluble Chitinous Substrates Was Improved by Fusing Auxiliary Domains. PLoS ONE, 2015, 10, e0116823.	1.1	23
46	Inverse relationship between chitobiase and transglycosylation activities of chitinase-D from Serratia proteamaculans revealed by mutational and biophysical analyses. Scientific Reports, 2015, 5, 15657.	1.6	21
47	New Class of Chitosanase from <i>Bacillus amyloliquefaciens</i> for the Generation of Chitooligosaccharides. Journal of Agricultural and Food Chemistry, 2021, 69, 78-87.	2.4	20
48	Changes in Root Exudates and Root Proteins in Groundnutâ€“Pseudomonas sp. Interaction Contribute to Root Colonization by Bacteria and Defense Response of the Host. Journal of Plant Growth Regulation, 2019, 38, 523-538.	2.8	19
49	Stomatal Closure and Rise in ROS/NO of Arabidopsis Guard Cells by Tobacco Microbial Elicitors: Cryptogein and Harpin. Frontiers in Plant Science, 2017, 8, 1096.	1.7	18
50	Pretreatment with KOH and KOH-urea enhanced hydrolysis of Î±-chitin by an endo-chitinase from Enterobacter cloacae subsp. cloacae. Carbohydrate Polymers, 2020, 235, 115952.	5.1	18
51	Management of late leaf spot of groundnut (Arachis hypogaea) with chlorothalonil-tolerant isolates of Pseudomonas aeruginosa. Plant Pathology, 2005, 54, 401-408.	1.2	17
52	Pseudomonas aeruginosaGSE 18 inhibits the cell wall degrading enzymes ofAspergillus nigerand activates defence-related enzymes of groundnut in control of collar rot disease. Australasian Plant Pathology, 2006, 35, 259.	0.5	17
53	Chitooligosaccharides are converted toN-acetylglucosamine byN-acetyl-Î²-hexosaminidase fromStenotrophomonas maltophilia. FEMS Microbiology Letters, 2013, 348, 19-25.	0.7	17
54	Amino Groups of Chitosan Are Crucial for Binding to a Family 32 Carbohydrate Binding Module of a Chitosanase from Paenibacillus elgii. Journal of Biological Chemistry, 2016, 291, 18977-18990.	1.6	17

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55	A transglycosylating chitinase from Chitiniphilus shinanonensis (CsChiL) hydrolyzes chitin in a processive manner. International Journal of Biological Macromolecules, 2020, 145, 1-10.	3.6	17
56	Synthesis, X-ray crystal structures and biological evaluation of some mono- and bi-cyclic 1,3-diazetidin-2-ones: non-natural Î²-lactam analogues. Journal of the Chemical Society Perkin Transactions 1, 1998, , 2597-2608.	0.9	16
57	Glucose dehydrogenase of a rhizobacterial strain of Enterobacter asburiae involved in mineral phosphate solubilization shares properties and sequence homology with other members of enterobacteriaceae. Indian Journal of Microbiology, 2007, 47, 126-131.	1.5	16
58	Involvement of mitochondria and metacaspase elevation in harpin_{Pss}â€induced cell death of <i>Saccharomyces cerevisiae</i>. Journal of Cellular Biochemistry, 2009, 107, 1150-1159.	1.2	16
59	Biophysical investigations on the aggregation and thermal unfolding of harpinPss and identification of leucine-zipper-like motifs in harpins. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2009, 1794, 1684-1692.	1.1	16
60	Bacillus sonorensis, a Novel Plant Growth Promoting Rhizobacterium in Improving Growth, Nutrition and Yield of Chilly (Capsicum annuum L.). Proceedings of the National Academy of Sciences India Section B - Biological Sciences, 2018, 88, 813-818.	0.4	16
61	Applicability of endochitinase of Flavobacterium johnsoniae with transglycosylation activity in generating long-chain chitooligosaccharides. International Journal of Biological Macromolecules, 2018, 117, 62-71.	3.6	16
62	Chitinase-E from Chitiniphilus shinanonensis generates chitobiose from chitin flakes. International Journal of Biological Macromolecules, 2020, 163, 1037-1043.	3.6	16
63	HarpinPss-mediated enhancement in growth and biological control of late leaf spot in groundnut by a chlorothalonil-tolerant Bacillus thuringiensis SFC24. Microbiological Research, 2012, 167, 194-198.	2.5	15
64	Extracellular matrixâ€associated proteome changes during nonâ€host resistance in citrusâ€"<i><scp>X</scp>anthomonas</i> interactions. Physiologia Plantarum, 2014, 150, 565-579.	2.6	14
65	Mutagenesis and molecular dynamics simulations revealed the chitooligosaccharide entry and exit points for chitinase D from Serratia proteamaculans. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 2685-2694.	1.1	14
66	Active-site mutations improved the transglycosylation activity of Stenotrophomonas maltophilia chitinase A. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 407-414.	1.1	14
67	Design, synthesis and in vitro antimicrobial activity of novel phenylbenzamido-aminothiazole-based azasterol mimics. Medicinal Chemistry Research, 2013, 22, 2975-2983.	1.1	13
68	Survival of Bacillus subtilis AF 1 in the bacterized peanut rhizosphere and its influence on native microflora and seedling growth. World Journal of Microbiology and Biotechnology, 1994, 10, 700-703.	1.7	12
69	Swapping the chitin-binding domain in Bacillus chitinases improves the substrate binding affinity and conformational stability. Molecular BioSystems, 2010, 6, 1492.	2.9	12
70	Microbial Chitinases for Chitin Waste Management. , 2012, , 135-150.		12
71	Difficult-to-culture bacteria in the rhizosphere: The underexplored signature microbial groups. Pedosphere, 2022, 32, 75-89.	2.1	12
72	Paenibacillus arachidis sp. nov., isolated from groundnut seeds. International Journal of Systematic and Evolutionary Microbiology, 2016, 66, 2923-2928.	0.8	11

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73	PLANT GROWTH-PROMOTING ACTIVITIES OF BACILLUS SUBTILIS MBI 600 (INTEGRALÂ®) AND ITS COMPATIBILITY WITH COMMONLY USED FUNGICIDES IN RICE SHEATH BLIGHT MANAGEMENT. Indian Journal of Medical Research, 2011, 3, 120-130.	0.0	11
74	Properties of a chimeric glucose dehydrogenase improved by site directed mutagenesis. Journal of Biotechnology, 2007, 131, 197-204.	1.9	10
75	Induced Defense in Plants: A Short Overview. Proceedings of the National Academy of Sciences India Section B - Biological Sciences, 2014, 84, 669-679.	0.4	9
76	Accumulation of transcription factors and cell signaling-related proteins in the nucleus during citrusâ€“Xanthomonas interaction. Journal of Plant Physiology, 2015, 184, 20-27.	1.6	9
77	Carboxy-terminal glycosyl hydrolase 18 domain of a carbohydrate active protein of Chitinophaga pinensis is a non-processive exochitinase. International Journal of Biological Macromolecules, 2018, 115, 1225-1232.	3.6	9
78	Alterations of Primary Metabolites in Root Exudates of Intercropped Cajanus cajanâ€“Zea mays Modulate the Adaptation and Proteome of Ensifer (Sinorhizobium) fredii NGR234. Microbial Ecology, 2022, 83, 1008-1025.	1.4	9
79	Chitooligosaccharides induce apoptosis in human breast cancer cells. Carbohydrate Polymer Technologies and Applications, 2021, 2, 100077.	1.6	8
80	A simple, rapid and yet less expensive method to detect chitinase in agarose plates. Journal of Proteomics, 2007, 70, 683-684.	2.4	7
81	Structural and Thermodynamic Signatures of Ligand Binding to the Enigmatic Chitinase D of <i>Serratia proteamaculans</i>. Journal of Physical Chemistry B, 2019, 123, 2270-2279.	1.2	7
82	Chitosan conjugates, microspheres, and nanoparticles with potential agrochemical activity. , 2020, , 437-464.		7
83	Poor Competitiveness of <i>Bradyrhizobium</i> in Pigeon Pea Root Colonization in Indian Soils. MBio, 2021, 12, e0042321.	1.8	7
84	Oligomerization, Conformational Stability and Thermal Unfolding of Harpin, HrpZPss and Its Hypersensitive Response-Inducing C-Terminal Fragment, C-214-HrpZPss. PLoS ONE, 2014, 9, e109871.	1.1	7
85	Highly Conserved Asp-204 and Gly-776 Are Important for Activity of the Quinoprotein Glucose Dehydrogenase of <i>Escherichia coli</i> and for Mineral Phosphate Solubilization. Journal of Molecular Microbiology and Biotechnology, 2010, 18, 109-119.	1.0	5
86	Partner-triggered proteome changes in the cell wall of Bacillus sonorensis and roots of groundnut benefit each other. Microbiological Research, 2018, 217, 91-100.	2.5	5
87	Truncated domains of human serum albumin improves the binding efficiency of uremic toxins: A surface plasmon resonance and computational approach. International Journal of Biological Macromolecules, 2020, 155, 1216-1225.	3.6	5
88	Efficient conversion of Î±-chitin by multi-modular chitinase from Chitiniphilus shinanonensis with KOH and KOH-urea pretreatment. Carbohydrate Polymers, 2020, 250, 116923.	5.1	5
89	Selection and mutational analyses of the substrate interacting residues of a chitinase from Enterobacter cloacae subsp. cloacae (EcChi2) to improve transglycosylation. International Journal of Biological Macromolecules, 2020, 165, 2432-2441.	3.6	5
90	Conditional expression of harpinPsscauses yeast cell death that shares features of cell death pathway with harpinPss-mediated plant hypersensitive response (HR). Physiological and Molecular Plant Pathology, 2001, 58, 267-276.	1.3	4

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91	Tapetum-specific expression of harpin_{Pss} causes male sterility in transgenic tobacco. Biologia Plantarum, 2012, 56, 628-634.	1.9	4
92	Microbial Chitinases: Natural Sources, Mutagenesis, and Directed Evolution to Obtain Thermophilic Counterparts. , 2013, , 649-669.		4
93	Thermally stable harpin, HrpZPss is sensitive to chemical denaturants: Probing tryptophan environment, chemical and thermal unfolding by fluorescence spectroscopy. Biochimie, 2013, 95, 2437-2444.	1.3	3
94	Apoplastic oxidative defenses during non-host interactions of tomato (Lycopersicon esculentum L.) with Magnaporthe grisea. Acta Physiologiae Plantarum, 2015, 37, 1.	1.0	3
95	Opportunities, Challenges and Directions in Science and Technology for Tackling COVID-19. , 2020, 5, 97-101.		3
96	Catalytic efficiency of a multi-domain transglycosylating chitinase from Enterobacter cloacae subsp. cloacae (EcChi2) is influenced by polycystic kidney disease domains. Enzyme and Microbial Technology, 2021, 143, 109702.	1.6	3
97	Elicitation of defense response by transglycosylated chitooligosaccharides in rice seedlings. Carbohydrate Research, 2021, 510, 108459.	1.1	3
98	Proteins Associated with Oxidative Burst and Cell Wall Strengthening Accumulate During Citrus-Xanthomonas Non-Host Interaction. Plant Molecular Biology Reporter, 2015, 33, 1349-1360.	1.0	2
99	Deciphering the thermotolerance of chitinase O from Chitiniphilus shinanonensis by in vitro and in silico studies. International Journal of Biological Macromolecules, 2022, 210, 44-52.	3.6	2
100	Crop Health Improvement with Groundnut Associated Bacteria. , 2011, , 407-430.		1
101	Isolation and purification of microbial community DNA from soil naturally enriched for chitin. Biologia (Poland), 2012, 67, 644-648.	0.8	1
102	Biological Control of Peanut Diseases. , 2002, , .		0
103	Thermodynamic insights into the role of aromatic residues in chitooligosaccharide binding to the transglycosylating chitinase-D from Serratia proteamaculans. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140414.	1.1	0