

Nicolas Ayub

List of Publications by Year in descending order

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35
papers

887
citations

567281

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h-index

477307

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36
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36
times ranked

1184
citing authors

#	ARTICLE	IF	CITATIONS
1	Major cereal crops benefit from biological nitrogen fixation when inoculated with the nitrogen-fixing bacterium <i>Pseudomonas protegens</i> Pf-5 X940. <i>Environmental Microbiology</i> , 2016, 18, 3522-3534.	3.8	92
2	Acetoacetyl-CoA thiolase regulates the mevalonate pathway during abiotic stress adaptation. <i>Journal of Experimental Botany</i> , 2011, 62, 5699-5711.	4.8	87
3	TIP5;1 is an aquaporin specifically targeted to pollen mitochondria and is probably involved in nitrogen remobilization in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2010, 64, 1038-1047.	5.7	82
4	Pollen-Specific Aquaporins NIP4;1 and NIP4;2 Are Required for Pollen Development and Pollination in <i>Arabidopsis thaliana</i> . <i>Plant Cell</i> , 2016, 28, 1053-1077.	6.6	78
5	New insight into the evolution of aquaporins from flowering plants and vertebrates: Orthologous identification and functional transfer is possible. <i>Gene</i> , 2012, 503, 165-176.	2.2	64
6	Engineering <i>Pseudomonas protegens</i> Pf-5 for Nitrogen Fixation and its Application to Improve Plant Growth under Nitrogen-Deficient Conditions. <i>PLoS ONE</i> , 2013, 8, e63666.	2.5	64
7	Prediction of Aquaporin Function by Integrating Evolutionary and Functional Analyses. <i>Journal of Membrane Biology</i> , 2014, 247, 107-125.	2.1	58
8	Alfalfa snakin-1 prevents fungal colonization and probably coevolved with rhizobia. <i>BMC Plant Biology</i> , 2014, 14, 248.	3.6	51
9	Hydroxybutyrate prevents protein aggregation in the halotolerant bacterium <i>Pseudomonas</i> sp. CT13 under abiotic stress. <i>Extremophiles</i> , 2012, 16, 455-462.	2.3	41
10	LOV domain photoreceptor, encoded in a genomic island, attenuates the virulence of <i>Pseudomonas syringae</i> in light-exposed <i>Arabidopsis</i> leaves. <i>Plant Journal</i> , 2013, 76, 322-331.	5.7	26
11	Understanding the function of bacterial and eukaryotic thiolases II by integrating evolutionary and functional approaches. <i>Gene</i> , 2014, 533, 5-10.	2.2	22
12	Genetic diversity in a world germplasm collection of tall fescue. <i>Genetics and Molecular Biology</i> , 2013, 36, 237-242.	1.3	21
13	mRNA biogenesis-related helicase eIF4AIII from <i>Arabidopsis thaliana</i> is an important factor for abiotic stress adaptation. <i>Plant Cell Reports</i> , 2016, 35, 1205-1208.	5.6	20
14	High-quality forage production under salinity by using a salt-tolerant AtNXH1-expressing transgenic alfalfa combined with a natural stress-resistant nitrogen-fixing bacterium. <i>Journal of Biotechnology</i> , 2018, 276-277, 42-45.	3.8	19
15	Plant growth-promoting bacterium <i>Pseudomonas fluorescens</i> FR1 secretes a novel type of extracellular polyhydroxybutyrate polymerase involved in abiotic stress response in plants. <i>Biotechnology Letters</i> , 2018, 40, 1419-1423.	2.2	14
16	Efficient CRISPR/Cas9 Genome Editing in Alfalfa Using a Public Germplasm. <i>Frontiers in Agronomy</i> , 2021, 3, .	3.3	14
17	The Ammonium Channel NOD26 is the Evolutionary Innovation that Drives the Emergence, Consolidation, and Dissemination of Nitrogen-Fixing Symbiosis in Angiosperms. <i>Journal of Molecular Evolution</i> , 2018, 86, 554-565.	1.8	11
18	Microevolution Rather than Large Genome Divergence Determines the Effectiveness of Legume-Rhizobia Symbiotic Interaction Under Field Conditions. <i>Journal of Molecular Evolution</i> , 2017, 85, 79-83.	1.8	10

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19	Generation of a multi-herbicide-tolerant alfalfa by using base editing. <i>Plant Cell Reports</i> , 2022, 41, 493-495.	5.6	10
20	Exploring the Ancestral Mechanisms of Regulation of Horizontally Acquired Nitrogenases. <i>Journal of Molecular Evolution</i> , 2015, 81, 84-89.	1.8	9
21	Plant Growth-Promoting Genes can Switch to be Virulence Factors via Horizontal Gene Transfer. <i>Microbial Ecology</i> , 2018, 76, 579-583.	2.8	9
22	Maximizing the expression of transgenic traits into elite alfalfa germplasm using a supertransgene configuration in heterozygous conditions. <i>Theoretical and Applied Genetics</i> , 2018, 131, 1111-1123.	3.6	9
23	Absence of the Nitrous Oxide Reductase Gene Cluster in Commercial Alfalfa Inoculants Is Probably Due to the Extensive Loss of Genes During Rhizobial Domestication. <i>Microbial Ecology</i> , 2018, 76, 299-302.	2.8	9
24	Stable symbiotic nitrogen fixation under water-deficit field conditions by a stress-tolerant alfalfa microsymbiont and its complete genome sequence. <i>Journal of Biotechnology</i> , 2017, 263, 52-54.	3.8	8
25	Spontaneous Mutations in the Nitrate Reductase Gene <i>napC</i> Drive the Emergence of Eco-friendly Low-N ₂ O-Emitting Alfalfa Rhizobia in Regions with Different Climates. <i>Microbial Ecology</i> , 2020, 79, 1044-1053.	2.8	8
26	Synthetic multi-antibiotic resistant plasmids in plant-associated bacteria from agricultural soils. <i>Journal of Global Antimicrobial Resistance</i> , 2020, 22, 113-116.	2.2	7
27	Exploring the Intrinsic Limits of Nitrogenase Transfer from Bacteria to Eukaryotes. <i>Journal of Molecular Evolution</i> , 2013, 77, 3-7.	1.8	6
28	Genetic analysis of environmental strains of the plant pathogen <i>Phytophthora capsici</i> reveals heterogeneous repertoire of effectors and possible effector evolution via genomic island. <i>FEMS Microbiology Letters</i> , 2015, 362, fnv189.	1.8	6
29	Elimination of <i>GlnK</i> Δ <i>amtB</i> affects serine biosynthesis and improves growth and stress tolerance of <i>Escherichia coli</i> under nutrient-rich conditions. <i>FEMS Microbiology Letters</i> , 2020, 367, .	1.8	4
30	pBAR ^{H3.2} , a native-optimized binary vector to bypass transgene silencing in alfalfa. <i>Plant Cell Reports</i> , 2020, 39, 683-685.	5.6	3
31	Whole-Genome Resequencing of Spontaneous Oxidative Stress-Resistant Mutants Reveals an Antioxidant System of <i>Bradyrhizobium japonicum</i> Involved in Soybean Colonization. <i>Microbial Ecology</i> , 2022, 84, 1133-1140.	2.8	3
32	Expanding the Benefits of <i>Tnt1</i> for the Identification of Dominant Mutations in Polyploid Crops: A Single Allelic Mutation in the <i>MsNAC39</i> Gene Produces Multifoliated Alfalfa. <i>Frontiers in Plant Science</i> , 2021, 12, 805032.	3.6	2
33	Understanding the intracellular-to-extracellular localization switch of polyhydroxybutyrate polymerase in <i>Pseudomonas</i> backgrounds as a microevolutionary process. <i>Journal of Theoretical Biology</i> , 2018, 456, 29-33.	1.7	1
34	Multiple ways to evade the bacteriostatic action of glyphosate in rhizobia include the mutation of the conserved serine 90 of the nitrogenase subunit <i>NifH</i> to alanine. <i>Research in Microbiology</i> , 2022, 173, 103952.	2.1	1
35	Exploring the Role of the NO-Detoxifying Enzyme <i>HmpA</i> in the Evolution of Domesticated Alfalfa Rhizobia. <i>Microbial Ecology</i> , 2021, , 1.	2.8	0