Nicolas Toro

List of Publications by Year
in descending order

112 papers	3,579 citations	94415 37 h-index	168376 53 g-index
114 all docs	114 docs citations	114 times ranked	2604 citing authors

#	Article	IF	Citations
1	Description of new Ensifer strains from nodules and proposal to transfer Ensifer adhaerens Casida 1982 to Sinorhizobium as Sinorhizobium adhaerens comb. nov. Request for an Opinion. International Journal of Systematic and Evolutionary Microbiology, 2003, 53, 1207-1217.	1.7	110
2	A Rhizobium meliloti mutant that forms ineffective pseudonodules in alfalfa produces exopolysaccharide but fails to form beta-(1----2) glucan. Journal of Bacteriology, 1987, 169, 880-884.	2.2	109
3	Group II introns in the bacterial world. Molecular Microbiology, 2000, 38, 917-926.	2.5	106
4	Identification of differentially expressed small nonâ€coding RNAs in the legume endosymbiont <i>Sinorhizobium meliloti</i> by comparative genomics. Molecular Microbiology, 2007, 66, 1080-1091.	2.5	106
5	Characterization of novel antibiotic resistance genes identified by functional metagenomics on soil samples. Environmental Microbiology, 2011, 13, 1101-1114.	3.8	104
6	Mesorhizobium chacoense sp. nov., a novel species that nodulates Prosopis alba in the Chaco Arido region (Argentina).. International Journal of Systematic and Evolutionary Microbiology, 2001, 51, 1011-1021.	1.7	100
7	The Agrobacterium tumefaciens virC1 gene product binds to overdrive, a T-DNA transfer enhancer. Journal of Bacteriology, 1989, 171, 6845-6849.	2.2	90
8	Bacterial group II introns: not just splicing. FEMS Microbiology Reviews, 2007, 31, 342-358.	8.6	90
9	The rhizosphere microbiome of burned holm-oak: potential role of the genus Arthrobacter in the recovery of burned soils. Scientific Reports, 2017, 7, 6008.	3.3	88
10	Bacteria and Archaea Group II introns: additional mobile genetic elements in the environment. Environmental Microbiology, 2003, 5, 143-151.	3.8	83
11	The Coexistence of Symbiosis and Pathogenicity-Determining Genes in Rhizobium rhizogenes Strains Enables Them to Induce Nodules and Tumors or Hairy Roots in Plants. Molecular Plant-Microbe Interactions, 2005, 18, 1325-1332.	2.6	71
12	Metagenomic Assessment of the Potential Microbial Nitrogen Pathways in the Rhizosphere of a Mediterranean Forest After a Wildfire. Microbial Ecology, 2015, 69, 895-904.	2.8	68
13	Splicing of the Sinorhizobium meliloti RmInt1 group II intron provides evidence of retroelement behavior. Nucleic Acids Research, 2011, 39, 1095-1104.	14.5	66
14	The Rhizobium meliloti putA gene: its role in the establishment of the symbiotic interaction with alfalfa. Molecular Microbiology, 1997, 23, 85-93.	2.5	65
15	Construction and Environmental Release of a Sinorhizobium meliloti Strain Genetically Modified To Be More Competitive for Alfalfa Nodulation. Applied and Environmental Microbiology, 2001, 67, 3860-3865.	3.1	65
16	Genome-wide profiling of Hfq-binding RNAs uncovers extensive post-transcriptional rewiring of major stress response and symbiotic regulons in<i>Sinorhizobium meliloti</i>. RNA Biology, 2014, 11, 563-579.	3.1	65
17	Homing of a bacterial group II intron with an intronâ€encoded protein lacking a recognizable endonuclease domain. Molecular Microbiology, 2000, 35, 1405-1412.	2.5	64
18	Role of the overdrive sequence in T-DNA border cleavage in Agrobacterium.. Proceedings of the National Academy of Sciences of the United States of America, 1988, 85, 8558-8562.	7.1	63

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19	Plasmids in Rhizobia: The Role of Nonsymbiotic Plasmids. Molecular Plant-Microbe Interactions, 1996, 9, 535.	2.6	63
20	Independent Activity of the Homologous Small Regulatory RNAs AbcR1 and AbcR2 in the Legume Symbiont Sinorhizobium meliloti. PLoS ONE, 2013, 8, e68147.	2.5	61
21	The Sinorhizobium meliloti RNA chaperone Hfq influences central carbon metabolism and the symbiotic interaction with alfalfa. BMC Microbiology, 2010, 10, 71.	3.3	58
22	Comprehensive Phylogenetic Analysis of Bacterial Reverse Transcriptases. PLoS ONE, 2014, 9, e114083.	2.5	56
23	Characterization and splicing in vivo of a Sinorhizobium meliloti group II intron associated with particular insertion sequences of the IS630-Tc1/IS3 retroposon superfamily. Molecular Microbiology, 1998, 28, 1295-1306.	2.5	55
24	The RmInt1 group II intron has two different retrohoming pathways for mobility using predominantly the nascent lagging strand at DNA replication forks for priming. Nucleic Acids Research, 2004, 32, 2880-2888.	14.5	54
25	Characterization of a<i>Rhizobium meliloti</i>Proline Dehydrogenase Mutant Altered in Nodulation Efficiency and Competitiveness on Alfalfa Roots. Molecular Plant-Microbe Interactions, 1995, 8, 492.	2.6	54
26	Nodulation competitiveness in the Rhizobium-legume symbiosis. World Journal of Microbiology and Biotechnology, 1996, 12, 157-162.	3.6	53
27	DNA Target Site Requirements for Homing in Vivo of a Bacterial Group II Intron Encoding a Protein Lacking the DNA Endonuclease Domain. Journal of Molecular Biology, 2003, 326, 413-423.	4.2	50
28	Changes in soil nutrient content and bacterial community after 12â€‰years of organic amendment application to a vineyard. European Journal of Soil Science, 2015, 66, 802-812.	3.9	49
29	Nucleotide Sequence and Characterization of Rhizobium meliloti Nodulation Competitiveness Genes nfe. Journal of Molecular Biology, 1993, 229, 570-576.	4.2	48
30	PADLOC: a web server for the identification of antiviral defence systems in microbial genomes. Nucleic Acids Research, 2022, 50, W541-W550.	14.5	47
31	The endemic Genista versicolor from Sierra Nevada National Park in Spain is nodulated by putative new Bradyrhizobium species and a novel symbiovar (sierranevadense). Systematic and Applied Microbiology, 2014, 37, 177-185.	2.8	45
32	Characterization of a large plasmid of Rhizobium meliloti involved in enhancing nodulation. Molecular Genetics and Genomics, 1986, 202, 331-335.	2.4	42
33	RecA-independent ectopic transposition in vivo of a bacterial group II intron. Nucleic Acids Research, 2000, 28, 4397-4402.	14.5	42
34	Mobility of the Sinorhizobium meliloti Group II Intron RmInt1 Occurs by Reverse Splicing into DNA, But Requires an Unknown Reverse Transcriptase Priming Mechanism. Journal of Molecular Biology, 2003, 327, 931-943.	4.2	42
35	Bacterial community structure in the rhizosphere of three cactus species from semi-arid highlands in central Mexico. Antonie Van Leeuwenhoek, 2012, 101, 891-904.	1.7	42
36	Systematic prediction of genes functionally associated with bacterial retrons and classification of the encoded tripartite systems. Nucleic Acids Research, 2020, 48, 12632-12647.	14.5	41

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37	Excision of the Sinorhizobium meliloti Group II Intron RmInt1 as Circles in Vivo. Journal of Biological Chemistry, 2006, 281, 28737-28744.	3.4	39
38	Effect of a Sinorhizobium meliloti Strain with a Modified putA Gene on the Rhizosphere Microbial Community of Alfalfa. Applied and Environmental Microbiology, 2002, 68, 4201-4208.	3.1	38
39	Bacterial community in the rhizosphere of the cactus species Mammillaria carnea during dry and rainy seasons assessed by deep sequencing. Plant and Soil, 2012, 357, 275-288.	3.7	38
40	Characterization and symbiotic importance of acidic extracellular polysaccharides of Rhizobium sp. strain GRH2 isolated from acacia nodules. Journal of Bacteriology, 1993, 175, 2826-2832.	2.2	37
41	Comprehensive Phylogenetic Analysis of Bacterial Group II Intron-Encoded ORFs Lacking the DNA Endonuclease Domain Reveals New Varieties. PLoS ONE, 2013, 8, e55102.	2.5	36
42	Identification of a Novel<i>Rhizobium meliloti</i>Nodulation Efficiency<i>nfe</i>Gene Homolog of<i>Agrobacterium</i>Ornithine Cyclodeaminase. Molecular Plant-Microbe Interactions, 1994, 7, 703.	2.6	35
43	The insertion sequence element ISRm2011-2 belongs to the IS630-Tcl family of transposable elements and is abundant in Rhizobium meliloti. Gene, 1995, 163, 59-64.	2.2	34
44	Sequence of ISRm4 from Rhizobium meliloti strain GR4. Gene, 1992, 120, 125-126.	2.2	32
45	Sinorhizobium meliloti nfe (Nodulation Formation Efficiency) Genes Exhibit Temporal and Spatial Expression Patterns Similar to Those of Genes Involved in Symbiotic Nitrogen Fixation. Molecular Plant-Microbe Interactions, 2000, 13, 583-591.	2.6	32
46	Dispersion of the RmInt1 group II intron in the Sinorhizobium meliloti genome upon acquisition by conjugative transfer. Nucleic Acids Research, 2006, 35, 214-222.	14.5	32
47	A survey of sRNA families in Î±-proteobacteria. RNA Biology, 2012, 9, 119-129.	3.1	32
48	Ectopic transposition of a group II intron in natural bacterial populations. Molecular Microbiology, 2001, 41, 645-652.	2.5	31
49	Complete Genome Sequence of the Alfalfa Symbiont <i>Sinorhizobium</i> /Ensifer meliloti Strain GR4. Genome Announcements, 2013, 1, .	0.8	31
50	Identification and characterization of bacterial class E group II introns. Gene, 2002, 299, 245-250.	2.2	30
51	The Reverse Transcriptases Associated with CRISPR-Cas Systems. Scientific Reports, 2017, 7, 7089.	3.3	30
52	Dispersal and Evolution of the Sinorhizobium meliloti Group II RmInt1 Intron in Bacteria that Interact with Plants. Molecular Biology and Evolution, 2005, 22, 1518-1528.	8.9	27
53	Recruitment of Reverse Transcriptase-Cas1 Fusion Proteins by Type VI-A CRISPR-Cas Systems. Frontiers in Microbiology, 2019, 10, 2160.	3.5	27
54	Multiple origins of reverse transcriptases linked to CRISPR-Cas systems. RNA Biology, 2019, 16, 1486-1493.	3.1	25

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55	Analysis of Rhizobium meliloti Sym Mutants Obtained by Heat Treatment. Applied and Environmental Microbiology, 1986, 51, 1148-1150.	3.1	25
56	Metabarcoding reveals that rhizospheric microbiota of Quercus pyrenaica is composed by a relatively small number of bacterial taxa highly abundant. Scientific Reports, 2019, 9, 1695.	3.3	23
57	Identification of nodule-dominant Rhizobium meliloti strains carrying pRmeGR4b-type plasmid within indigenous soil populations by PCR using primers derived from specific DNA sequences. FEMS Microbiology Ecology, 1995, 17, 161-168.	2.7	21
58	Spacer acquisition from RNA mediated by a natural reverse transcriptase-Cas1 fusion protein associated with a type III-D CRISPRâ€“Cas system in Vibrio vulnificus. Nucleic Acids Research, 2019, 47, 10202-10211.	14.5	21
59	Rhizosphere-Bacterial Community in Eperua falcata (Caesalpiniaceae) a Putative Nitrogen-Fixing Tree from French Guiana Rainforest. Microbial Ecology, 2007, 53, 317-327.	2.8	20
60	Use of RmInt1, a Group IIB Intron Lacking the Intron-Encoded Protein Endonuclease Domain, in Gene Targeting. Applied and Environmental Microbiology, 2011, 77, 854-861.	3.1	20
61	Sinorhizobium meliloti putA Gene Regulation: a New Model within the Family Rhizobiaceae. Journal of Bacteriology, 2000, 182, 1935-1941.	2.2	19
62	An alternative intronâ€“exon pairing scheme implied byÂunexpected inÂvitro activities ofÂgroup II intron RmInt1 from SinorhizobiumÂmeliloti. Biochimie, 2006, 88, 711-717.	2.6	19
63	Ornithine cyclodeaminase activity inRhizobium meliloti. FEMS Microbiology Letters, 1994, 119, 209-213.	1.8	18
64	Bacterial Diversity in the Soda Saline Crater Lake from Isabel Island, Mexico. Microbial Ecology, 2016, 71, 68-77.	2.8	18
65	Symbiotic characteristics and selection of autochthonous strains of Sinorhizobium meliloti populations in different soils. Soil Biology and Biochemistry, 1999, 31, 1039-1047.	8.8	16
66	Prokaryotic reverse transcriptases: from retroelements to specialized defense systems. FEMS Microbiology Reviews, 2021, 45, .	8.6	16
67	Diversity of group II introns in the genome of Sinorhizobium meliloti strain 1021: splicing and mobility of RmInt1. Molecular Genetics and Genomics, 2003, 268, 628-636.	2.1	14
68	Structural features in the Câ€terminal region of the <i>Sinorhizobiumâ€ƒmeliloti</i> RmInt1 group II intronâ€encoded protein contribute to its maturase and intron DNAâ€insertion function. FEBS Journal, 2010, 277, 244-254.	4.7	14
69	Relevance of the Branch Point Adenosine, Coordination Loop, and 3â€² Exon Binding Site for in Vivo Excision of the Sinorhizobium meliloti Group II Intron RmInt1. Journal of Biological Chemistry, 2011, 286, 21154-21163.	3.4	14
70	Use of the computer-retargeted group II intron RmInt1 of<i>Sinorhizobium meliloti</i>for gene targeting. RNA Biology, 2014, 11, 391-401.	3.1	14
71	Identification and Distribution of Plasmid-Type A Replicator Region in Rhizobia. Molecular Plant-Microbe Interactions, 1996, 9, 843.	2.6	14
72	Insights into the history of a bacterial group II intron remnant from the genomes of the nitrogen-fixing symbionts Sinorhizobium meliloti and Sinorhizobium medicae. Heredity, 2014, 113, 306-315.	2.6	13

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73	On the Origin and Evolutionary Relationships of the Reverse Transcriptases Associated With Type III CRISPR-Cas Systems. Frontiers in Microbiology, 2018, 9, 1317.	3.5	13
74	Nucleotide sequence of Rhizobium meliloti GR4 insertion sequence IS Rm3 linked to the nodulation competitiveness locus nfe. Plant Molecular Biology, 1992, 20, 307-309.	3.9	12
75	Potential for alternative intron-exon pairings in group II intron RmInt1 from Sinorhizobium meliloti and its relatives. Rna, 2006, 12, 338-341.	3.5	12
76	Exon sequence requirements for excision in vivo of the bacterial group II intron RmInt1. BMC Molecular Biology, 2011, 12, 24.	3.0	12
77	ISRm4-1 and ISRm9, two novel insertion sequences from Sinorhizobium meliloti. Gene, 1998, 207, 93-96.	2.2	11
78	In vitro characterization of the splicing efficiency and fidelity of the RmInt1 group II intron as a means of controlling the dispersion of its host mobile element. Rna, 2014, 20, 2000-2010.	3.5	11
79	Nodulation and Delayed Nodule Senescence: Strategies of Two Bradyrhizobium Japonicum Isolates with High Capacity to Fix Nitrogen. Current Microbiology, 2018, 75, 997-1005.	2.2	11
80	Contribution of Mobile Group II Introns to Sinorhizobium meliloti Genome Evolution. Frontiers in Microbiology, 2018, 9, 627.	3.5	11
81	UG/Abi: a highly diverse family of prokaryotic reverse transcriptases associated with defense functions. Nucleic Acids Research, 2022, 50, 6084-6101.	14.5	11
82	Identification and nucleotide sequence of Rhizobium meliloti insertion sequence ISRm6, a small transposable element that belongs to the IS3 family. Gene, 1996, 175, 43-48.	2.2	10
83	Attachment to plant roots and nod gene expression are not affected by pH or calcium in the acid-tolerant alfalfa-nodulating bacteria Rhizobium sp. LPU83. FEMS Microbiology Ecology, 2004, 48, 71-77.	2.7	10
84	Spread of the group II intron RmInt1 and its insertion sequence target sites in the plant endosymbiont<i>Sinorhizobium meliloti</i>. Mobile Genetic Elements, 2011, 1, 2-7.	1.8	10
85	Analysis of rhizobial endosymbionts of Vicia, Lathyrus and Trifolium species used to maintain mountain firewalls in Sierra Nevada National Park (South Spain). Systematic and Applied Microbiology, 2017, 40, 92-101.	2.8	10
86	A group II intron-encoded protein interacts with the cellular replicative machinery through the Î²-sliding clamp. Nucleic Acids Research, 2019, 47, 7605-7617.	14.5	10
87	Localization of a Bacterial Group II Intron-Encoded Protein in Eukaryotic Nuclear Splicing-Related Cell Compartments. PLoS ONE, 2013, 8, e84056.	2.5	8
88	Taxonomic and Functional Diversity of a Quercus pyrenaica Willd. Rhizospheric Microbiome in the Mediterranean Mountains. Forests, 2017, 8, 390.	2.1	8
89	Characterization of aRhizobium meliloti ndvBMutant and a Symbiotic Revertant that Regains Wild-Type Properties. Molecular Plant-Microbe Interactions, 1992, 5, 288.	2.6	8
90	Accumulation of Cell-AssociatedÎ²(1-2)-Glucan inRhizobium melilotiStrain GR4 in Response to Osmotic Potential. Molecular Plant-Microbe Interactions, 1993, 6, 11.	2.6	8

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91	Host Factors Influencing the Retrohoming Pathway of Group II Intron RmInt1, Which Has an Intron-Encoded Protein Naturally Devoid of Endonuclease Activity. PLoS ONE, 2016, 11, e0162275.	2.5	8
92	Insights into the strategies used by related group II introns to adapt successfully for the colonisation of a bacterial genome. RNA Biology, 2014, 11, 1061-1071.	3.1	7
93	A new insertion sequence fromSinorhizobium melilotiwith homology to IS1357fromMethylobacteriumsp. and IS1452fromAcetobacter pasteurianus. FEMS Microbiology Letters, 1998, 158, 83-87.	1.8	6
94	Characterization of the Sinorhizobium meliloti genes encoding a functional dihydrodipicolinate synthase (dapA) and dihydrodipicolinate reductase (dapB). Archives of Microbiology, 2000, 173, 438-444.	2.2	6
95	Complete Genome Sequence of the RmInt1 Group II Intronless Sinorhizobium meliloti Strain RMO17. Genome Announcements, 2014, 2, .	0.8	6
96	Genomic characterization of Sinorhizobium meliloti AK21, a wild isolate from the Aral Sea Region. SpringerPlus, 2015, 4, 259.	1.2	5
97	The early events underlying genome evolution in a localized Sinorhizobium meliloti population. BMC Genomics, 2016, 17, 556.	2.8	5
98	Multicopy Vectors Carrying the Klebsiella pneumoniae nifA Gene Do Not Enhance the Nodulation Competitiveness of Sinorhizobium meliloti on Alfalfa. Molecular Plant-Microbe Interactions, 1998, 11, 839-842.	2.6	4
99	Localization of a bacterial group II intron-encoded protein in human cells. Scientific Reports, 2015, 5, 12716.	3.3	4
100	Functionality of In vitro Reconstituted Group II Intron RmInt1-Derived Ribonucleoprotein Particles. Frontiers in Molecular Biosciences, 2016, 3, 58.	3.5	4
101	The underlying process of early ecological and genetic differentiation in a facultative mutualistic Sinorhizobium meliloti population. Scientific Reports, 2017, 7, 675.	3.3	4
102	Polymerase Chain Reactionâ€"Temperature Gradient Gel Electrophoresis Requires the Use of High-Performance Liquid Chromatography-Purified Oligonucleotides. Analytical Biochemistry, 2002, 300, 101-103.	2.4	3
103	Characterisation of symbiotically efficient alfalfa-nodulating rhizobia isolated from acid soils of Argentina and Uruguay. FEMS Microbiology Ecology, 1999, 28, 169-176.	2.7	3
104	Characterization of rhizobia homologues of Sinorhizobium meliloti insertion sequences ISRm3 and ISRm4. FEMS Microbiology Ecology, 1998, 25, 341-348.	2.7	2
105	Inactivation of group II intron RmInt1 in the Sinorhizobium meliloti genome. Scientific Reports, 2015, 5, 12036.	3.3	2
106	Bacterial Group II Introns: Identification and Mobility Assay. Methods in Molecular Biology, 2016, 1400, 21-32.	0.9	1
107	Complete Genome Sequence of Sinorhizobium meliloti Strain AK21, a Salt-Tolerant Isolate from the Aral Sea Region. Microbiology Resource Announcements, 2020, 9, .	0.6	1
108	Identification of nodule-dominant Rhizobium meliloti strains carrying pRmeGR4b-type plasmid within indigenous soil populations by PCR using primers derived from specific DNA sequences. FEMS Microbiology Ecology, 1995, 17, 161-168.	2.7	1

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109	The Sinorhizobium meliloti insertion sequence (IS) elements ISRm102F34-1/ISRm7 and ISRm220-13-5 belong to a new family of insertion sequence elements. FEMS Microbiology Letters, 1999, 172, 1-7.	1.8	1
110	Rhizosphere Metagenomics. , 2012, , 1-8.		0
111	DNA cleavage and reverse splicing of ribonucleoprotein particles reconstituted in vitro with linear RmInt1 RNA. RNA Biology, 2019, 16, 930-939.	3.1	0
112	Identification of Group II Intron RmInt1 Binding Sites in a Bacterial Genome. Frontiers in Molecular Biosciences, 2022, 9, 834020.	3.5	0