Roland Karl Hartmann

List of Publications by Year
in descending order

106	4,921	136950	98798
papers	citations	32 h-index	67 g-index

113	113	113	6162
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	14.6	976
2	tRNAdb 2009: compilation of tRNA sequences and tRNA genes. Nucleic Acids Research, 2009, 37, D159-D162.	14.5	751
3	A single Arabidopsis organellar protein has RNase P activity. Nature Structural and Molecular Biology, 2010, 17, 740-744.	8.2	203
4	Broad-spectrum antiviral activity of the eIF4A inhibitor silvestrol against corona- and picornaviruses. Antiviral Research, 2018, 150, 123-129.	4.1	160
5	The enigma of ribonuclease P evolution. Trends in Genetics, 2003, 19, 561-569.	6.7	136
6	Locked Nucleic Acid Oligonucleotides. BioDrugs, 2007, 21, 235-243.	4.6	135
7	Chapter 8 The Making of tRNAs and More â€“ RNase P and tRNase Z. Progress in Molecular Biology and Translational Science, 2009, 85, 319-368.	1.7	111
8	Role of metal ions in the hydrolysis reaction catalyzed by RNase P RNA from Bacillus subtilis. Journal of Molecular Biology, 1999, 290, 433-445.	4.2	89
9	Lead-ion-induced cleavage of RNase P RNA. FEBS Journal, 1994, 219, 49-56.	0.2	79
10	The natural compound silvestrol is a potent inhibitor of Ebola virus replication. Antiviral Research, 2017, 137, 76-81.	4.1	76
11	Differential role of the intermolecular base-pairs G292-C 75 and G293-C 74 in the reaction catalyzed by Escherichia coli RNase P RNA 1 1Edited by A. R. Fersht. Journal of Molecular Biology, 2000, 299, 941-951.	4.2	75
12	Nuclear RNase P of Trypanosoma brucei: A Single Protein in Place of the Multicomponent RNA-Protein Complex. Cell Reports, 2012, 2, 19-25.	6.4	71
13	Role of the D arm and the anticodon arm in tRNA recognition by eubacterial and eukaryotic RNase P enzymes. Biochemistry, 1993, 32, 13046-13053.	2.5	66
14	Kinetics and Thermodynamics of the RNase P RNA Cleavage Reaction:Analysis of tRNA 3'-end Variants. Journal of Molecular Biology, 1995, 247, 161-172.	4.2	65
15	Distribution of Ribonucleoprotein and Protein-Only RNase P in Eukarya. Molecular Biology and Evolution, 2015, 32, msv187.	8.9	56
16	Catalysis by RNase P RNA. Journal of Biological Chemistry, 2003, 278, 43394-43401.	3.4	55
17	Experimental RNomics in Aquifex aeolicus: identification of small non-coding RNAs and the putative 6S RNA homolog. Nucleic Acids Research, 2005, 33, 1949-1960.	14.5	53
18	Guanosine 2-NH2 groups of Escherichia coli RNase P RNA involved in intramolecular tertiary contacts and direct interactions with tRNA. Rna, 1999, 5, 102-116.	3.5	51

#	Article	IF	Citations
19	Type A and B RNase P RNAs are interchangeable in vivo despite substantial biophysical differences. EMBO Reports, 2006, 7, 411-417.	4.5	51
20	The precursor tRNA 3'-CCA interaction with Escherichia coli RNase P RNA is essential for catalysis by RNase P in vivo. Rna, 2006, 12, 2135-2148.	3.5	48
21	In vivo and in vitro analysis of 6S RNA-templated short transcripts inBacillus subtilis. RNA Biology, 2011, 8, 839-849.	3.1	47
22	Antisense Inhibition of RNase P. Journal of Biological Chemistry, 2006, 281, 30613-30620.	3.4	46
23	Minimal and RNA-free RNase P in Aquifex aeolicus. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11121-11126.	7.1	46
24	A pRNA-induced structural rearrangement triggers 6S-1 RNA release from RNA polymerase inBacillus subtilis. EMBO Journal, 2012, 31, 1727-1738.	7.8	45
25	RNA Binding of Ebola Virus VP30 Is Essential for Activating Viral Transcription. Journal of Virology, 2016, 90, 7481-7496.	3.4	43
26	Northern blot detection of endogenous small RNAs (Â14 nt) in bacterial total RNA extracts. Nucleic Acids Research, 2010, 38, e147-e147.	14.5	42
27	Exploring the minimal substrate requirements for trans-cleavage by RNase P holoenzymes from Escherichia coli and Bacillus subtilis. Molecular Microbiology, 2001, 41, 131-143.	2.5	41
28	Selection of Hammerhead Ribozyme Variants with Low Mg2+ Requirement: Importance of Stem-Loop II. ChemBioChem, 2002, 3, 1066-1071.	2.6	41
29	Dissemination of 6S RNA among Bacteria. RNA Biology, 2014, 11, 1467-1478.	3.1	40
30	Analysis of RNase P Protein (rnpA) Expression in Bacillus subtilis Utilizing Strains with Suppressible rnpA Expression. Journal of Bacteriology, 2006, 188, 6816-6823.	2.2	38
31	Effects of phosphorothioate modifications on precursor tRNA processing by eukaryotic RNase P enzymes. Journal of Molecular Biology, 2000, 298, 559-565.	4.2	37
32	The putative RNase P motif in the DEAD box helicase Hera is dispensable for efficient interaction with RNA and helicase activity. Nucleic Acids Research, 2008, 36, 5800-5811.	14.5	37
33	Regulation of transcription by 6S RNAs. RNA Biology, 2014, 11, 508-521.	3.1	37
34	Comparison of broad-spectrum antiviral activities of the synthetic rocaglate CR-31-B (â˜) and the eIF4A-inhibitor Silvestrol. Antiviral Research, 2020, 175, 104706.	4.1	36
35	Substrate recognition and cleavage-site selection by a single-subunit protein-only RNase P. Nucleic Acids Research, 2016, 44, 2323-2336.	14.5	35
36	6S RNA â€“ an ancient regulator of bacterial RNA polymerase rediscovered. Biological Chemistry, 2005, 386, 1273-1277.	2.5	33

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37	In vivo and in vitro investigation of bacterial type B RNase P interaction with tRNA 3â€²-CCA. Nucleic Acids Research, 2007, 35, 2060-2073.	14.5	33
38	Improved Northern Blot Detection of Small RNAs Using EDC Crosslinking and DNA/LNA Probes. Methods in Molecular Biology, 2015, 1296, 41-51.	0.9	33
39	Mechanistic comparison of Bacillus subtilis 6S-1 and 6S-2 RNAsâ€”commonalities and differences. Rna, 2014, 20, 348-359.	3.5	32
40	Cleavage efficiencies of model substrates for ribonuclease P fromEscherichia coliandThermus thermophilus. Nucleic Acids Research, 1992, 20, 5963-5970.	14.5	31
41	Potential contact sites between the protein and RNA subunit in the Bacillus subtilis RNase P holoenzyme 1 1Edited by J. Karn. Journal of Molecular Biology, 2002, 315, 551-560.	4.2	31
42	tRNA Processing by Proteinâ€Only versus RNAâ€Based RNase P: Kinetic Analysis Reveals Mechanistic Differences. ChemBioChem, 2012, 13, 2270-2276.	2.6	31
43	The sequence of the 6S RNA gene ofPseudomonas aeruginosa. Nucleic Acids Research, 1987, 15, 4583-4591.	14.5	29
44	RNase P of the Cyanophora paradoxa cyanelle: A plastid ribozyme. Biochimie, 2007, 89, 1528-1538.	2.6	29
45	Minor changes largely restore catalytic activity of archaeal RNase P RNA from Methanothermobacter thermoautotrophicus. Nucleic Acids Research, 2009, 37, 231-242.	14.5	29
46	RNA binding specificity of Ebola virus transcription factor VP30. RNA Biology, 2016, 13, 783-798.	3.1	29
47	An unusual mechanism of bacterial gene expression revealed for the RNase P protein of Thermus strains. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 5724-5729.	7.1	27
48	Phenotypic characterization and complementation analysis of Bacillus subtilis 6S RNA single and double deletion mutants. Biochimie, 2015, 117, 87-99.	2.6	26
49	The rocaglate CR-31-B (â^') inhibits SARS-CoV-2 replication at non-cytotoxic, low nanomolar concentrations in vitro and ex vivo. Antiviral Research, 2021, 186, 105012.	4.1	26
50	tRNA maturation in Aquifex aeolicus. Biochimie, 2002, 84, 713-722.	2.6	25
51	5â€²-End maturation of tRNA in Aquifex aeolicus. Biological Chemistry, 2008, 389, 395-403.	2.5	24
52	Playing RNase P Evolution: Swapping the RNA Catalyst for a Protein Reveals Functional Uniformity of Highly Divergent Enzyme Forms. PLoS Genetics, 2014, 10, e1004506.	3.5	24
53	Studies on Escherichia coli RNase P RNA with Zn2+ as the catalytic cofactor. Nucleic Acids Research, 2005, 33, 2464-2474.	14.5	22
54	Protein-only RNase P function in Escherichia coli: viability, processing defects and differences between PRORP isoenzymes. Nucleic Acids Research, 2017, 45, 7441-7454.	14.5	21

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55	Impact of RNA Isolation Protocols on RNA Detection by Northern Blotting. Methods in Molecular Biology, 2015, 1296, 29-38.	0.9	21
56	Purine N7 groups that are crucial to the interaction of Escherichia coli RNase P RNA with tRNA. Rna, 2001, 7, 958-968.	3.5	20
57	Evaluation of Bacterial RNase P RNA as a Drug Target. ChemBioChem, 2003, 4, 1041-1048.	2.6	20
58	NMR spectroscopic Evidence for Mn2+(Mg2+) Binding to a precursor-tRNA Microhelix Near the Potential RNase P Cleavage Site. Journal of Molecular Biology, 2001, 305, 181-189.	4.2	19
59	Structural basis of a ribozyme's thermostability: P1 L9 interdomain interaction in RNase P RNA. Rna, 2007, 14, 127-133.	3.5	17
60	Function of heterologous and truncated RNase P proteins in Bacillus subtilis. Molecular Microbiology, 2007, 66, 801-813.	2.5	17
61	Antisense Inhibition of Escherichia coli RNase P RNA: Mechanistic Aspects. ChemBioChem, 2003, 4, 1049-1056.	2.6	16
62	Thermostable RNase P RNAs lacking P18 identified in the Aquificales. Rna, 2006, 12, 1915-1921.	3.5	16
63	Correlation between Processing Efficiency for Ribonuclease P Minimal Substrates and Conformation of the Nucleotide â^'1 at the Cleavage Positionâ€. Biochemistry, 2001, 40, 3363-3369.	2.5	15
64	Genomewide comparison and novel ncRNAs of Aquificales. BMC Genomics, 2014, 15, 522.	2.8	15
65	Structure and mechanistic features of the prokaryotic minimal RNase P. ELife, 2021, 10, .	6.0	15
66	Insects in anthelminthics research: Lady beetle-derived harmonine affects survival, reproduction and stem cell proliferation of Schistosoma mansoni. PLoS Neglected Tropical Diseases, 2019, 13, e0007240.	3.0	14
67	Biarylalkyl Carboxylic Acid Derivatives as Novel Antischistosomal Agents. ChemMedChem, 2016, 11, 1459-1468.	3.2	13
68	Bacillus subtilis 6S-2 RNA serves as a template for short transcripts in vivo. Rna, 2016, 22, 614-622.	3.5	13
69	6S RNA in Rhodobacter sphaeroides: 6S RNA and pRNA transcript levels peak in late exponential phase and gene deletion causes a high salt stress phenotype. RNA Biology, 2017, 14, 1627-1637.	3.1	13
70	Diversity and Evolution of RNase P. , 2020, , 255-299.		13
71	Structural and mechanistic characterization of 6S RNA from the hyperthermophilic bacterium Aquifex aeolicus. Biochimie, 2015, 117, 72-86.	2.6	11
72	2â€²-Fluoro-Pyrimidine-Modified RNA Aptamers Specific for Lipopolysaccharide Binding Protein (LBP). International Journal of Molecular Sciences, 2018, 19, 3883.	4.1	11

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73	Homologs of aquifex aeolicus proteinâ€•only RNase P are not the major RNase P activities in the archaea haloferax volcanii and methanosarcina mazei. IUBMB Life, 2019, 71, 1109-1116.	3.4	10
74	Hexamer phasing governs transcription initiation in the 3â€²-leader of Ebola virus. Rna, 2020, 26, 439-453.	3.5	10
75	An important piece of the RNase P jigsaw solved. Trends in Biochemical Sciences, 2007, 32, 247-250.	7.5	9
76	U1 Adaptors for the Therapeutic Knockdown of the Oncogene Pim-1 Kinase in Glioblastoma. Nucleic Acid Therapeutics, 2013, 23, 264-272.	3.6	9
77	Analysis of the Cleavage Mechanism by Protein-Only RNase P Using Precursor tRNA Substrates with Modifications at the Cleavage Site. Journal of Molecular Biology, 2016, 428, 4917-4928.	4.2	9
78	Site-Specific Cleavage of RNAs Derived from the PIM1 3â€²-UTR by a Metal-Free Artificial Ribonuclease. Molecules, 2019, 24, 807.	3.8	9
79	6S-2 RNA deletion in the undomesticated B. subtilis strain NCIB 3610 causes a biofilm derepression phenotype. RNA Biology, 2021, 18, 79-92.	3.1	9
80	Role of Metal Ions In The Cleavage Mechanism by The E. Coli Rnase P Holoenzyme. Nucleosides & Nucleotides, 1997, 16, 721-725.	0.5	8
81	A 2â€²-methyl or 2â€²-methylene group at G+1 in precursor tRNA interferes with Mg2+ binding at the enzyme-substrate interface in E-S complexes of E. coli RNase P. Biological Chemistry, 2007, 388, 717-26.	2.5	8
82	Characterization of RNase P RNA Activity. Methods in Molecular Biology, 2012, 848, 61-72.	0.9	8
83	Structure of an A-form RNA duplex obtained by degradation of 6S RNA in a crystallization droplet. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 634-639.	0.7	8
84	Escherichia coli RNase P RNA: Substrate Ribose Modifications at G+1, but Not Nucleotide â^'1/+73 Base Pairing, Affect the Transition State for Cleavage Chemistry. Journal of Molecular Biology, 2008, 379, 1-8.	4.2	7
85	Investigation of catalysis by bacterial RNase P via LNA and other modifications at the scissile phosphodiester. Nucleic Acids Research, 2009, 37, 7638-7653.	14.5	7
86	Archaealâ€Bacterial Chimeric RNase P RNAs: Towards Understanding RNA's Architecture, Function and Evolution. ChemBioChem, 2011, 12, 1536-1543.	2.6	7
87	Bacterial type B RNase P: functional characterization of the L5.1-L15.1 tertiary contact and antisense inhibition. Rna, 2016, 22, 1699-1709.	3.5	6
88	Development of Biarylalkyl Carboxylic Acid Amides with Improved Antiâ€schistosomal Activity. ChemMedChem, 2019, 14, 1856-1862.	3.2	6
89	RNA secondary structure at the transcription start site influences EBOV transcription initiation and replication in a length- and stability-dependent manner. RNA Biology, 2021, 18, 523-536.	3.1	6
90	Analysis of bacterial RNase P RNA and protein interaction by a magnetic biosensor technique. Biochimie, 2010, 92, 772-778.	2.6	5

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91	RNase P as a Drug Target. , 2010, , 235-256.		5
92	Supramolecular membrane-associated assemblies of RNA metabolic proteins in Escherichia coli. Biochemical Journal, 2014, 458, e1-e3.	3.7	5
93	Similarities and differences between 6S RNAs from Bradyrhizobium japonicum and Sinorhizobium meliloti. Journal of Microbiology, 2020, 58, 945-956.	2.8	5
94	Regulation of VP30-Dependent Transcription by RNA Sequence and Structure in the Genomic Ebola Virus Promoter. Journal of Virology, 2021, 95, .	3.4	5
95	Identification and characterization of short leader and trailer RNAs synthesized by the Ebola virus RNA polymerase. PLoS Pathogens, 2021, 17, e1010002.	4.7	5
96	Expanding RNA Silencing Approaches by U1 Adaptors. ChemBioChem, 2009, 10, 1599-1601.	2.6	4
97	RNase P Inhibitors Identified as Aggregators. Antimicrobial Agents and Chemotherapy, 2021, 65, e0030021.	3.2	3
98	Involvement of E. coli 6S RNA in Oxidative Stress Response. International Journal of Molecular Sciences, 2022, 23, 3653.	4.1	3
99	Redirection of miRNAâ€Argonaute Complexes to Specific Target Sites by Synthetic Adaptor Molecules. Chemistry and Biodiversity, 2020, 17, e2000272.	2.1	2
100	Silvestrol: a potential future drug for acute Ebola and other viral infections. Future Virology, 2017, 12, 243-245.	1.8	1
101	Northern Blot Detection of Tiny RNAs. Methods in Molecular Biology, 2021, 2300, 41-58.	0.9	1
102	Comparative study on tertiary contacts and folding of RNase P RNAs from a psychrophilic, a mesophilic/radiation-resistant, and a thermophilic bacterium. Rna, 2021, 27, 1204-1219.	3.5	1
103	Insights into 6S RNA in lactic acid bacteria (LAB). BMC Genomic Data, 2021, 22, 29.	1.7	1
104	Rapid preparation of 6S RNA-free B. subtilis ÏƒA-RNA polymerase and ÏƒA. Journal of Microbiological Methods, 2021, 190, 106324.	1.6	1
105	Aquificae. , 2019, , .		1
106	Structural and Functional Insight into the Mechanism of Bacillus subtilis 6S-1 RNA Release from RNA Polymerase. Non-coding RNA, 2022, 8, 20.	2.6	1