CecÃ-lia M Arraiano

List of Publications by Year
in descending order

141 papers	5,242 citations	87843 38 h-index	106281 65 g-index
150 all docs	150 docs citations	150 times ranked	4134 citing authors

#	Article	IF	Citations
1	The critical role of RNA processing and degradation in the control of gene expression. FEMS Microbiology Reviews, 2010, 34, 883-923.	3.9	285
2	The exosome contains domains with specific endoribonuclease, exoribonuclease and cytoplasmic mRNA decay activities. Nature Structural and Molecular Biology, 2009, 16, 56-62.	3.6	263
3	Unravelling the dynamics of RNA degradation by ribonuclease II and its RNA-bound complex. Nature, 2006, 443, 110-114.	13.7	207
4	The exoribonuclease Dis3L2 defines a novel eukaryotic RNA degradation pathway. EMBO Journal, 2013, 32, 1842-1854.	3.5	173
5	Degradation of mRNA in bacteria: emergence of ubiquitous features. BioEssays, 2000, 22, 235-244.	1.2	160
6	Cold shock induction of RNase R and its role in the maturation of the quality control mediator SsrA/tmRNA. Molecular Microbiology, 2003, 50, 1349-1360.	1.2	141
7	Characterization of the role of ribonucleases in Salmonella small RNA decay. Nucleic Acids Research, 2007, 35, 7651-7664.	6.5	133
8	The stationary-phase morphogene bolA from Escherichia coli is induced by stress during early stages of growth. Molecular Microbiology, 1999, 32, 789-798.	1.2	126
9	Base Pairing Interaction between 5â€²- and 3â€²-UTRs Controls icaR mRNA Translation in Staphylococcus aureus. PLoS Genetics, 2013, 9, e1004001.	1.5	123
10	The gene bolA regulates dacA (PBP5), dacC (PBP6) and ampC (AmpC), promoting normal morphology in Escherichia coli. Molecular Microbiology, 2002, 45, 1729-1740.	1.2	110
11	The role of RNases in the regulation of small RNAs. Current Opinion in Microbiology, 2014, 18, 105-115.	2.3	104
12	The crucial role of PNPase in the degradation of small RNAs that are not associated with Hfq. Rna, 2012, 18, 844-855.	1.6	99
13	Chapter 5 The Role of 3â€²â€“5â€² Exoribonucleases in RNA Degradation. Progress in Molecular Biology and Translational Science, 2009, 85, 187-229.	0.9	89
14	BolA Is a Transcriptional Switch That Turns Off Motility and Turns On Biofilm Development. MBio, 2015, 6, e02352-14.	1.8	85
15	Regulation of the small regulatory RNA MicA by ribonuclease III: a target-dependent pathway. Nucleic Acids Research, 2011, 39, 2918-2930.	6.5	77
16	A PNPase Dependent CRISPR System in Listeria. PLoS Genetics, 2014, 10, e1004065.	1.5	76
17	SATP (YaaH), a succinateâ€“acetate transporter protein in <i>Escherichia coli</i>. Biochemical Journal, 2013, 454, 585-595.	1.7	74
18	RNase II removes the oligo(A) tails that destabilize the rpsO mRNA of Escherichia coli. Rna, 2000, 6, 1185-1193.	1.6	73

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19	RNase R affects gene expression in stationary phase: regulation of omp A. Molecular Microbiology, 2006, 60, 219-228.	1.2	73
20	The <scp>RNA</scp> â€binding protein Hfq is important for ribosome biogenesis and affects translation fidelity. EMBO Journal, 2018, 37, .	3.5	73
21	RNA-Binding Proteins Driving the Regulatory Activity of Small Non-coding RNAs in Bacteria. Frontiers in Molecular Biosciences, 2020, 7, 78.	1.6	73
22	PNPase modulates RNase II expression in Escherichia coli: implications for mRNA decay and cell metabolism. Molecular Microbiology, 1996, 20, 1033-1042.	1.2	70
23	PNPase is a key player in the regulation of small RNAs that control the expression of outer membrane proteins. Rna, 2008, 14, 543-551.	1.6	69
24	Effect of Escherichia coli Morphogene bolA on Biofilms. Applied and Environmental Microbiology, 2004, 70, 5682-5684.	1.4	68
25	Characterization of the Functional Domains of Escherichia coli RNase II. Journal of Molecular Biology, 2006, 360, 921-933.	2.0	68
26	BolA Inhibits Cell Elongation and Regulates MreB Expression Levels. Journal of Molecular Biology, 2009, 385, 1345-1351.	2.0	64
27	Next generation sequencing analysis reveals that the ribonucleases RNase II, RNase R and PNPase affect bacterial motility and biofilm formation in E. coli. BMC Genomics, 2015, 16, 72.	1.2	63
28	The Virulence of Salmonella enterica Serovar Typhimurium in the Insect Model Galleria mellonella Is Impaired by Mutations in RNase E and RNase III. Applied and Environmental Microbiology, 2013, 79, 6124-6133.	1.4	60
29	Identification of a DNA-binding site for the transcription factor Haa1, required for Saccharomyces cerevisiae response to acetic acid stress. Nucleic Acids Research, 2011, 39, 6896-6907.	6.5	53
30	RNase R mutants elucidate the catalysis of structured RNA: RNA-binding domains select the RNAs targeted for degradation. Biochemical Journal, 2009, 423, 291-301.	1.7	52
31	Importance and key events of prokaryotic RNA decay: the ultimate fate of an RNA molecule. Wiley Interdisciplinary Reviews RNA, 2011, 2, 818-836.	3.2	52
32	Intracellular ribonucleases involved in transcript processing and decay: Precision tools for RNA. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2013, 1829, 491-513.	0.9	52
33	RNase II levels change according to the growth conditions: characterization of gmr, a new Escherichia coli gene involved in the modulation of RNase II. Molecular Microbiology, 2001, 39, 1550-1561.	1.2	51
34	The role of the S1 domain in exoribonucleolytic activity: Substrate specificity and multimerization. Rna, 2007, 13, 317-327.	1.6	50
35	New targets for drug design: importance of nsp14/nsp10 complex formation for the 3â€™â€5â€™ exoribonucleolytic activity on SARSâ€CoVâ€2. FEBS Journal, 2021, 288, 5130-5147.	2.2	48
36	Identification and developmental expression of a 5â€²â€“3â€² exoribonuclease from Drosophila melanogaster. Mechanisms of Development, 1998, 79, 51-55.	1.7	44

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37	A single mutation in Escherichia coli ribonuclease II inactivates the enzyme without affecting RNA binding. FEBS Journal, 2005, 272, 363-374.	2.2	44
38	New Insights into the Mechanism of RNA Degradation by Ribonuclease II. Journal of Biological Chemistry, 2008, 283, 13070-13076.	1.6	44
39	New molecular interactions broaden the functions of the RNA chaperone Hfq. Current Genetics, 2019, 65, 1313-1319.	0.8	43
40	<i>Pseudomonas putida</i> KT2440 is naturally endowed to withstand industrialâ€scale stress conditions. Microbial Biotechnology, 2020, 13, 1145-1161.	2.0	42
41	Regulating the regulators: How ribonucleases dictate the rules in the control of small non-coding RNAs. RNA Biology, 2008, 5, 230-243.	1.5	41
42	Bacterial Response to Oxidative Stress and RNA Oxidation. Frontiers in Genetics, 2021, 12, 821535.	1.1	41
43	The poly(A)-dependent degradation pathway of <i>rps</i>O mRNA is primarily mediated by RNase R. Rna, 2009, 15, 316-326.	1.6	38
44	BolA Is Required for the Accurate Regulation of c-di-GMP, a Central Player in Biofilm Formation. MBio, 2017, 8, .	1.8	38
45	Post-transcriptional control of gene expression: effectors of mRNA decay. Molecular Microbiology, 2003, 49, 267-276.	1.2	37
46	The role of RNase R in trans-translation and ribosomal quality control. Biochimie, 2015, 114, 113-118.	1.3	37
47	SraL sRNA interaction regulates the terminator by preventing premature transcription termination of <i>rho</i> mRNA. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3042-3051.	3.3	37
48	Determination of Key Residues for Catalysis and RNA Cleavage Specificity. Journal of Biological Chemistry, 2009, 284, 20486-20498.	1.6	34
49	Effect of the morphogenebolAon the permeability of theEscherichia coliouter membrane. FEMS Microbiology Letters, 2006, 260, 106-111.	0.7	33
50	The CR3 motif of Rrp44p is important for interaction with the core exosome and exosome function. Nucleic Acids Research, 2012, 40, 9298-9307.	6.5	33
51	An RpoS-dependent sRNA regulates the expression of a chaperone involved in protein folding. Rna, 2013, 19, 1253-1265.	1.6	32
52	The <scp>RNase II</scp>/<scp>RNB</scp> family of exoribonucleases: putting the â€˜Disâ€™ in disease. Wiley Interdisciplinary Reviews RNA, 2013, 4, 607-615.	3.2	32
53	The Bacterial Protein Azurin Impairs Invasion and FAK/Src Signaling in P-Cadherin-Overexpressing Breast Cancer Cell Models. PLoS ONE, 2013, 8, e69023.	1.1	30
54	Drosophilagenetazman, an orthologue of the yeast exosome component Rrp44p/Dis3, is differentially expressed during development. Developmental Dynamics, 2005, 232, 733-737.	0.8	29

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55	Characterization of the RNase R association with ribosomes. BMC Microbiology, 2014, 14, 34.	1.3	29
56	Sinorhizobium meliloti YbeY is an endoribonuclease with unprecedented catalytic features, acting as silencing enzyme in riboregulation. Nucleic Acids Research, 2017, 45, 1371-1391.	6.5	29
57	Small RNA Modules Confer Different Stabilities and Interact Differently with Multiple Targets. PLoS ONE, 2013, 8, e52866.	1.1	29
58	The importance of proteins of the RNase II/RNB-family in pathogenic bacteria. Frontiers in Cellular and Infection Microbiology, 2014, 4, 68.	1.8	28
59	The role of endoribonucleases in the regulation of RNase R. Biochemical and Biophysical Research Communications, 2006, 343, 731-737.	1.0	27
60	BolA Affects Cell Growth, and Binds to the Promoters of Penicillin-Binding Proteins 5 and 6 and Regulates Their Expression. Journal of Microbiology and Biotechnology, 2011, 21, 243-251.	0.9	27
61	Adaptation to carbon starvation: RNase III ensures normal expression levels of bolA1p mRNA and ÏƒS. Biochimie, 2006, 88, 341-346.	1.3	26
62	The 3'-5' exoribonuclease Dis3 regulates the expression of specific microRNAs in<i>Drosophila</i>wing imaginal discs. RNA Biology, 2015, 12, 728-741.	1.5	26
63	Inactivation of the decay pathway initiated at an internal site by RNase E promotes poly(A)-dependent degradation of the rpsO mRNA in Escherichia coli. Molecular Microbiology, 2003, 50, 1283-1294.	1.2	25
64	Surprises in the 3â€²â€‹end: â€˜Uâ€™ can decide too!. FEBS Journal, 2015, 282, 3489-3499.	2.2	25
65	Poly(A)â€‐polymerase I links transcription with mRNA degradation via Ïƒ S proteolysis. Molecular Microbiology, 2006, 60, 177-188.	1.2	24
66	RNase II: The finer details of the<i>Modus operandi</i>of a molecular killer. RNA Biology, 2010, 7, 276-281.	1.5	24
67	Swapping the domains of exoribonucleases RNase II and RNase R: Conferring upon RNase II the ability to degrade ds RNA. Proteins: Structure, Function and Bioinformatics, 2011, 79, 1853-1867.	1.5	24
68	Breaking through the stress barrier: the role of BolA in Gram-negative survival. World Journal of Microbiology and Biotechnology, 2014, 30, 2559-2566.	1.7	24
69	Modulating Heterologous Gene Expression with Portable mRNA-Stabilizing 5â€²-UTR Sequences. ACS Synthetic Biology, 2018, 7, 2177-2188.	1.9	24
70	Major 3â€²â€“5â€² Exoribonucleases in the Metabolism of Coding and Non-coding RNA. Progress in Molecular Biology and Translational Science, 2018, 159, 101-155.	0.9	23
71	Biochemical Characterization of the RNase II Family of Exoribonucleases from the Human Pathogens <i>Salmonella typhimurium</i> and <i>Streptococcus pneumoniae</i>. Biochemistry, 2009, 48, 11848-11857.	1.2	21
72	Synergies between RNA degradation and trans-translation in Streptococcus pneumoniae: cross regulation and co-transcription of RNase R and SmpB. BMC Microbiology, 2012, 12, 268.	1.3	21

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73	The RNase R from Campylobacter jejuni Has Unique Features and Is Involved in the First Steps of Infection. Journal of Biological Chemistry, 2014, 289, 27814-27824.	1.6	20
74	Investigation on the anaerobic propionate degradation by <i>Escherichia coli</i> K12. Molecular Microbiology, 2017, 103, 55-66.	1.2	20
75	Stress Response Protein BolA Influences Fitness and Promotes Salmonella enterica Serovar Typhimurium Virulence. Applied and Environmental Microbiology, 2018, 84, .	1.4	20
76	Escherichia coli RNase II: characterization of the promoters involved in the transcription of rnb. Microbiology (United Kingdom), 1996, 142, 367-375.	0.7	19
77	Ribonucleases, antisense RNAs and the control of bacterial plasmids. Plasmid, 2015, 78, 26-36.	0.4	18
78	Regulatory noncoding RNAs: functions and applications in health and disease. FEBS Journal, 2021, 288, 6308-6309.	2.2	18
79	The Two Weapons against Bacterial Biofilms: Detection and Treatment. Antibiotics, 2021, 10, 1482.	1.5	18
80	Analysis of the in vivo decay of the Escherichia coli dicistronic pyrF-orfF transcript: evidence for multiple degradation pathways 1 1Edited by M. Yaniv. Journal of Molecular Biology, 1997, 268, 261-272.	2.0	17
81	Comparison of EMSA and SPR for the Characterization of RNAâ€"RNase II Complexes. Protein Journal, 2010, 29, 394-397.	0.7	17
82	The acetate uptake transporter family motif â€œNPAPLGL(M/S)â€•is essential for substrate uptake. Fungal Genetics and Biology, 2019, 122, 1-10.	0.9	17
83	Tailor-made sRNAs: a plasmid tool to control the expression of target mRNAs in Pseudomonas putida. Plasmid, 2020, 109, 102503.	0.4	17
84	Chapter 8 Characterizing Ribonucleases In Vitro. Methods in Enzymology, 2008, 447, 131-160.	0.4	16
85	PNPase is involved in the coordination of mRNA degradation and expression in stationary phase cells of Escherichia coli. BMC Genomics, 2018, 19, 848.	1.2	16
86	Biofilm Formation and Antibiotic Resistance in Salmonella Typhimurium Are Affected by Different Ribonucleases. Journal of Microbiology and Biotechnology, 2014, 24, 8-12.	0.9	16
87	BolA affects cell growth, and binds to the promoters of penicillin-binding proteins 5 and 6 and regulates their expression. Journal of Microbiology and Biotechnology, 2011, 21, 243-51.	0.9	16
88	Characterization of the biochemical properties of <i>Campylobacter jejuni</i> RNase III. Bioscience Reports, 2013, 33, .	1.1	15
89	Characterization of the BolA Homolog IbaG: A New Gene Involved in Acid Resistance. Journal of Microbiology and Biotechnology, 2012, 22, 484-493.	0.9	15
90	The Role of Ribonucleases and sRNAs in the Virulence of Foodborne Pathogens. Frontiers in Microbiology, 2017, 8, 910.	1.5	14

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91	The rnb Gene of Synechocystis PCC6803 Encodes a RNA Hydrolase Displaying RNase II and Not RNase R Enzymatic Properties. PLoS ONE, 2012, 7, e32690.	1.1	13
92	Precise physical mapping of theEscherichia coli rnb gene, encoding ribonuclease II. Molecular Genetics and Genomics, 1995, 248, 242-246.	2.4	12
93	Effect of the increased stability of the penicillin amidase mRNA on the protein expression levels. FEBS Letters, 2005, 579, 5069-5073.	1.3	12
94	DIS3 isoforms vary in their endoribonuclease activity and are differentially expressed within haematological cancers. Biochemical Journal, 2018, 475, 2091-2105.	1.7	12
95	The Implication of mRNA Degradation Disorders on Human DISease: Focus on DIS3 and DIS3-Like Enzymes. Advances in Experimental Medicine and Biology, 2019, 1157, 85-98.	0.8	12
96	Dis3L2 regulates cell proliferation and tissue growth through a conserved mechanism. PLoS Genetics, 2020, 16, e1009297.	1.5	12
97	A BolA-like morphogene from the algaChlamydomonas reinhardtiichanges morphology and induces biofilm formation inEscherichia coli. FEMS Microbiology Letters, 2013, 339, 39-47.	0.7	11
98	A role for DIS3L2 over natural nonsense-mediated mRNA decay targets in human cells. Biochemical and Biophysical Research Communications, 2019, 518, 664-671.	1.0	11
99	Pneumococcal RNase R globally impacts protein synthesis by regulating the amount of actively translating ribosomes. RNA Biology, 2019, 16, 211-219.	1.5	11
100	Hfq and RNase R Mediate rRNA Processing and Degradation in a Novel RNA Quality Control Process. MBio, 2020, 11, .	1.8	11
101	Modulating the RNA Processing and Decay by the Exosome: Altering Rrp44/Dis3 Activity and End-Product. PLoS ONE, 2013, 8, e76504.	1.1	11
102	The role of RNA regulators, quorum sensing and câ€diâ€GMP in bacterial biofilm formation. FEBS Open Bio, 2023, 13, 975-991.	1.0	11
103	Expression, purification, crystallization and preliminary diffraction data characterization ofEscherichia coliribonuclease II (RNase II). Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 684-687.	0.7	10
104	A new target for an old regulator: H-NS represses transcription of bolA morphogene by direct binding to both promoters. Biochemical and Biophysical Research Communications, 2011, 411, 50-55.	1.0	10
105	Two Residues in the Basic Region of the Yeast Transcription Factor Yap8 Are Crucial for Its DNA-Binding Specificity. PLoS ONE, 2013, 8, e83328.	1.1	10
106	The nsp15 Nuclease as a Good Target to Combat SARS-CoV-2: Mechanism of Action and Its Inactivation with FDA-Approved Drugs. Microorganisms, 2022, 10, 342.	1.6	10
107	Sinorhizobium meliloti RNase III: Catalytic Features and Impact on Symbiosis. Frontiers in Genetics, 2018, 9, 350.	1.1	9
108	Exoribonucleases as Modulators of Virulence in Pathogenic Bacteria. Frontiers in Cellular and Infection Microbiology, 2012, 2, 65.	1.8	8

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109	Reprogramming bacteria with RNA regulators. Biochemical Society Transactions, 2019, 47, 1279-1289.	1.6	8
110	Rossmann-fold motifs can confer multiple functions to metabolic enzymes: RNA binding and ribonuclease activity of a UDP-glucose dehydrogenase. Biochemical and Biophysical Research Communications, 2013, 430, 218-224.	1.0	7
111	RNase R is associated in a functional complex with the RhpA DEAD-box RNA helicase in<i>Helicobacter pylori</i>. Nucleic Acids Research, 2021, 49, 5249-5264.	6.5	7
112	Prediction of novel non-coding RNAs relevant for the growth of Pseudomonas putida in a bioreactor. Microbiology (United Kingdom), 2020, 166, 149-156.	0.7	7
113	A comparative analysis of the citrate permease P mRNA stability inLactococcus lactisbiovardiacetylactisandEscherichia coli. FEMS Microbiology Letters, 1999, 172, 115-122.	0.7	6
114	The only exoribonuclease present in Haloferax volcanii has an unique response to temperature changes. Biochimica Et Biophysica Acta - General Subjects, 2012, 1820, 1543-1552.	1.1	6
115	A new tool for cloning and gene expression in Streptococcus pneumoniae. Plasmid, 2013, 70, 247-253.	0.4	6
116	Biochemical characterization of Campylobacter jejuni PNPase, an exoribonuclease important for bacterial pathogenicity. Biochimie, 2018, 147, 70-79.	1.3	6
117	Phosphorylation status of BolA affects its role in transcription and biofilm development. FEBS Journal, 2021, 288, 961-979.	2.2	6
118	A new role for RNase II in mRNA decay: Striking differences between RNase II mutants and similarities with a strain deficient in RNase E. FEMS Microbiology Letters, 1996, 145, 315-324.	0.7	5
119	Ribonucleases control distinct traits of <i>Pseudomonas putida</i> lifestyle. Environmental Microbiology, 2021, 23, 174-189.	1.8	5
120	RNase R, a New Virulence Determinant of Streptococcus pneumoniae. Microorganisms, 2022, 10, 317.	1.6	5
121	<scp> <i>Burkholderia cenocepacia</i> </scp> K56â€2 trimeric autotransporter adhesin BcaA binds TNFR1 and contributes to induce airway inflammation. Cellular Microbiology, 2017, 19, e12677.	1.1	4
122	Defining the impact of exoribonucleases in the shift between exponential and stationary phases. Scientific Reports, 2019, 9, 16271.	1.6	4
123	The world of ribonucleases from pseudomonads: a short trip through the main features and singularities. Microbial Biotechnology, 2021, 14, 2316-2333.	2.0	4
124	Isolation and Analysis of Bacterial Ribosomes Through Sucrose Gradient Ultracentrifugation. Methods in Molecular Biology, 2020, 2106, 299-310.	0.4	4
125	Degradation products of the cytochrome C3 mRNA are similar in Desulfovibrio vulgaris Hildenborough and Escherichia coli. Gene, 1996, 177, 223-228.	1.0	3
126	Characterizing the Role of Exoribonucleases in the Control of Microbial Gene Expression: Differential RNA-Seq. Methods in Enzymology, 2018, 612, 1-24.	0.4	3

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127	NMR-Metabolomics Shows That BolA Is an Important Modulator of Salmonella Typhimurium Metabolic Processes under Virulence Conditions. Metabolites, 2019, 9, 243.	1.3	2
128	Identification of temperatureâ€sensitive mutations and characterization of thermolabile RN ase II variants. FEBS Letters, 2019, 593, 352-360.	1.3	2
129	Experimental supporting data on DIS3L2 over nonsense-mediated mRNA decay targets in human cells. Data in Brief, 2020, 28, 104943.	0.5	2
130	In silico prediction and expression profile analysis of small non-coding RNAs in Herbaspirillum seropedicae SmR1. BMC Genomics, 2020, 21, 134.	1.2	2
131	The Bacterial Counterparts of the Eukaryotic Exosome: An Evolutionary Perspective. Methods in Molecular Biology, 2020, 2062, 37-46.	0.4	2
132	Editorial overview: Cell regulation: Microbial cell regulationâ€"looking in from the outside. Current Opinion in Microbiology, 2014, 18, v-vii.	2.3	1
133	A precision RNA degradation machinery shapes stem cell development. Journal of Cell Biology, 2019, 218, 2437-2438.	2.3	1
134	Post-Transcriptional Control in the Regulation of Polyhydroxyalkanoates Synthesis. Life, 2021, 11, 853.	1.1	1
135	Construction and characterization of an absolute deletion mutant of Escherichia coli ribonuclease II. , 0, .		1
136	A new role for RNase II in mRNA decay: Striking differences between RNase II mutants and similarities with a strain deficient in RNase E. FEMS Microbiology Letters, 1996, 145, 315-324.	0.7	1
137	How hydrolytic exoribonucleases impact human disease: Two sides of the same story. FEBS Open Bio, 2023, 13, 957-974.	1.0	1
138	Preface. Methods in Enzymology, 2008, 447, xxiii-xxiv.	0.4	0
139	Stories of the future: manipulating <scp>RNA</scp> and Intra/Interkingdom communication. Microbial Biotechnology, 2019, 12, 48-50.	2.0	0
140	In Vitro Characterization of the Prokaryotic Counterparts of the Exosome Complex. Methods in Molecular Biology, 2020, 2062, 47-61.	0.4	0
141	RNA Structure Analysis by Chemical Probing with DMS and CMCT. Methods in Molecular Biology, 2020, 2106, 209-223.	0.4	0