Ronald R Breaker

List of Publications by Citations

213 papers	28,579 citations	88 h-index	168 g-index
232 ext. papers	31,574 ext. citations	12.1 avg, IF	7.56 L-index

#	Paper	IF	Citations
213	A DNA enzyme that cleaves RNA. *Chemistry and Biology*, **1994**, 1, 223-9		1045
212	Thiamine derivatives bind messenger RNAs directly to regulate bacterial gene expression. *Nature*, **2002**, 419, 952-6	50.4	912
211	Control of gene expression by a natural metabolite-responsive ribozyme. *Nature*, **2004**, 428, 281-6	50.4	735
210	Gene regulation by riboswitches. *Nature Reviews Molecular Cell Biology*, **2004**, 5, 451-63	48.7	695
209	Regulation of bacterial gene expression by riboswitches. *Annual Review of Microbiology*, **2005**, 59, 487-517	17.5	607
208	Importance of the Debye screening length on nanowire field effect transistor sensors. *Nano Letters* , **2007**, 7, 3405-9	11.5	593
207	Genetic control by a metabolite binding mRNA. *Chemistry and Biology*, **2002**, 9, 1043		578
206	Riboswitches control fundamental biochemical pathways in Bacillus subtilis and other bacteria. *Cell*, **2003**, 113, 577-86	56.2	575
205	Riboswitches in eubacteria sense the second messenger cyclic di-GMP. *Science*, **2008**, 321, 411-3	33.3	556
204	An mRNA structure that controls gene expression by binding FMN. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 15908-13	11.5	504
203	Structural basis for discriminative regulation of gene expression by adenine- and guanine-sensing mRNAs. *Chemistry and Biology*, **2004**, 11, 1729-41		448
202	The structural and functional diversity of metabolite-binding riboswitches. *Annual Review of Biochemistry*, **2009**, 78, 305-34	29.1	443
201	Relationship between internucleotide linkage geometry and the stability of RNA. *Rna*, **1999**, 5, 1308-25	5.8	437
200	Riboswitches as versatile gene control elements. *Current Opinion in Structural Biology*, **2005**, 15, 342-8	8.1	436
199	A glycine-dependent riboswitch that uses cooperative binding to control gene expression. *Science*, **2004**, 306, 275-9	33.3	434
198	Riboswitches and the RNA world. *Cold Spring Harbor Perspectives in Biology*, **2012**, 4,	10.2	426
197	Adenine riboswitches and gene activation by disruption of a transcription terminator. *Nature Structural and Molecular Biology*, **2004**, 11, 29-35	17.6	411

196	Kinetics of RNA Degradation by Specific Base Catalysis of Transesterification Involving the 2‐Hydroxyl Group. *Journal of the American Chemical Society*, **1999**, 121, 5364-5372	16.4	401
195	New RNA motifs suggest an expanded scope for riboswitches in bacterial genetic control. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 6421-6	11.5	385
194	Prospects for riboswitch discovery and analysis. *Molecular Cell*, **2011**, 43, 867-79	17.6	384
193	The speed of RNA transcription and metabolite binding kinetics operate an FMN riboswitch. *Molecular Cell*, **2005**, 18, 49-60	17.6	375
192	The distributions, mechanisms, and structures of metabolite-binding riboswitches. *Genome Biology*, **2007**, 8, R239	18.3	358
191	Riboswitches as antibacterial drug targets. *Nature Biotechnology*, **2006**, 24, 1558-64	44.5	354
190	An mRNA structure that controls gene expression by binding S-adenosylmethionine. *Nature Structural and Molecular Biology*, **2003**, 10, 701-7	17.6	349
189	Structural basis for gene regulation by a thiamine pyrophosphate-sensing riboswitch. *Nature*, **2006**, 441, 1167-71	50.4	347
188	A DNA enzyme with Mg(2+)-dependent RNA phosphoesterase activity. *Chemistry and Biology*, **1995**, 2, 655-60		343
187	Control of alternative RNA splicing and gene expression by eukaryotic riboswitches. *Nature*, **2007**, 447, 497-500	50.4	336
186	DNA enzymes. *Nature Biotechnology*, **1997**, 15, 427-31	44.5	308
185	Metabolite-binding RNA domains are present in the genes of eukaryotes. *Rna*, **2003**, 9, 644-7	5.8	307
184	Rational design of allosteric ribozymes. *Chemistry and Biology*, **1997**, 4, 453-9		306
183	Natural and engineered nucleic acids as tools to explore biology. *Nature*, **2004**, 432, 838-45	50.4	302
182	Engineering precision RNA molecular switches. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 3584-9	11.5	292
181	Widespread genetic switches and toxicity resistance proteins for fluoride. *Science*, **2012**, 335, 233-235	33.3	282
180	Comparative genomics reveals 104 candidate structured RNAs from bacteria, archaea, and their metagenomes. *Genome Biology*, **2010**, 11, R31	18.3	278
179	An allosteric self-splicing ribozyme triggered by a bacterial second messenger. *Science*, **2010**, 329, 845-848	33.3	273

178	An mRNA structure in bacteria that controls gene expression by binding lysine. *Genes and Development*, **2003**, 17, 2688-97	12.6	269
177	Identification of 22 candidate structured RNAs in bacteria using the CMfinder comparative genomics pipeline. *Nucleic Acids Research*, **2007**, 35, 4809-19	20.1	256
176	Riboswitch diversity and distribution. *Rna*, **2017**, 23, 995-1011	5.8	253
175	Engineered allosteric ribozymes as biosensor components. *Current Opinion in Biotechnology*, **2002**, 13, 31-9	11.4	249
174	In-line probing analysis of riboswitches. *Methods in Molecular Biology*, **2008**, 419, 53-67	1.4	243
173	The kinetics of ligand binding by an adenine-sensing riboswitch. *Biochemistry*, **2005**, 44, 13404-14	3.2	239
172	Cleaving DNA with DNA. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 2233-7	11.5	233
171	Structural basis of ligand binding by a c-di-GMP riboswitch. *Nature Structural and Molecular Biology*, **2009**, 16, 1218-23	17.6	232
170	In Vitro Selection of Catalytic Polynucleotides. *Chemical Reviews*, **1997**, 97, 371-390	68.1	232
169	Riboswitch control of gene expression in plants by splicing and alternative 3Tend processing of mRNAs. *Plant Cell*, **2007**, 19, 3437-50	11.6	229
168	Coenzyme B12 riboswitches are widespread genetic control elements in prokaryotes. *Nucleic Acids Research*, **2004**, 32, 143-50	20.1	228
167	Genetic control by metabolite-binding riboswitches. *ChemBioChem*, **2003**, 4, 1024-32	3.8	216
166	In vitro selection of self-cleaving DNAs. *Chemistry and Biology*, **1996**, 3, 1039-46		214
165	Tandem riboswitch architectures exhibit complex gene control functions. *Science*, **2006**, 314, 300-4	33.3	210
164	An amino acid as a cofactor for a catalytic polynucleotide. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 6027-31	11.5	202
163	Riboswitches in eubacteria sense the second messenger c-di-AMP. *Nature Chemical Biology*, **2013**, 9, 834-9	11.7	201
162	Immobilized RNA switches for the analysis of complex chemical and biological mixtures. *Nature Biotechnology*, **2001**, 19, 336-41	44.5	199
161	Evidence for a second class of S-adenosylmethionine riboswitches and other regulatory RNA motifs in alpha-proteobacteria. *Genome Biology*, **2005**, 6, R70	18.3	191

160	Thiamine pyrophosphate riboswitches are targets for the antimicrobial compound pyrithiamine. *Chemistry and Biology*, **2005**, 12, 1325-35		187
159	A riboswitch selective for the queuosine precursor preQ1 contains an unusually small aptamer domain. *Nature Structural and Molecular Biology*, **2007**, 14, 308-17	17.6	186
158	6S RNA is a widespread regulator of eubacterial RNA polymerase that resembles an open promoter. *Rna*, **2005**, 11, 774-84	5.8	180
157	Production of RNA by a polymerase protein encapsulated within phospholipid vesicles. *Journal of Molecular Evolution*, **1994**, 39, 555-9	3.1	180
156	A widespread self-cleaving ribozyme class is revealed by bioinformatics. *Nature Chemical Biology*, **2014**, 10, 56-60	11.7	177
155	Computational design and experimental validation of oligonucleotide-sensing allosteric ribozymes. *Nature Biotechnology*, **2005**, 23, 1424-33	44.5	174
154	Antibacterial lysine analogs that target lysine riboswitches **2007**, 3, 44-9		172
153	Ribozyme speed limits. *Rna*, **2003**, 9, 907-18	5.8	163
152	R2R--software to speed the depiction of aesthetic consensus RNA secondary structures. *BMC Bioinformatics*, **2011**, 12, 3	3.6	160
151	Roseoflavin is a natural antibacterial compound that binds to FMN riboswitches and regulates gene expression. *RNA Biology*, **2009**, 6, 187-94	4.8	159
150	Phosphorylating DNA with DNA. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 2746-51	11.5	156
149	Allosteric selection of ribozymes that respond to the second messengers cGMP and cAMP. *Nature Structural Biology*, **1999**, 6, 1062-71		148
148	New classes of self-cleaving ribozymes revealed by comparative genomics analysis. *Nature Chemical Biology*, **2015**, 11, 606-10	11.7	142
147	Deoxyribozymes: new players in the ancient game of biocatalysis. *Current Opinion in Structural Biology*, **1999**, 9, 315-23	8.1	131
146	Nucleic acid molecular switches. *Trends in Biotechnology*, **1999**, 17, 469-76	15.1	128
145	A widespread riboswitch candidate that controls bacterial genes involved in molybdenum cofactor and tungsten cofactor metabolism. *Molecular Microbiology*, **2008**, 68, 918-32	4.1	127
144	Allosteric nucleic acid catalysts. *Current Opinion in Structural Biology*, **2000**, 10, 318-25	8.1	125
143	Riboswitches that sense S-adenosylhomocysteine and activate genes involved in coenzyme recycling. *Molecular Cell*, **2008**, 29, 691-702	17.6	123

142	Capping DNA with DNA. *Biochemistry*, **2000**, 39, 3106-14	3.2	121
141	Small, highly active DNAs that hydrolyze DNA. *Journal of the American Chemical Society*, **2013**, 135, 9121-6	16.4	116
140	Tech.Sight. Molecular biology. Making catalytic DNAs. *Science*, **2000**, 290, 2095-6	33.3	113
139	Guanine riboswitch variants from Mesoplasma florum selectively recognize 2′-deoxyguanosine. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 16092-7	11.5	109
138	Altering molecular recognition of RNA aptamers by allosteric selection. *Journal of Molecular Biology*, **2000**, 298, 623-32	6.5	109
137	Identification of hammerhead ribozymes in all domains of life reveals novel structural variations. *PLoS Computational Biology*, **2011**, 7, e1002031	5	104
136	A common speed limit for RNA-cleaving ribozymes and deoxyribozymes. *Rna*, **2003**, 9, 949-57	5.8	104
135	Bacterial riboswitches cooperatively bind Ni(2+) or Co(2+) ions and control expression of heavy metal transporters. *Molecular Cell*, **2015**, 57, 1088-1098	17.6	103
134	Characterization of a DNA-cleaving deoxyribozyme. *Bioorganic and Medicinal Chemistry*, **2001**, 9, 2589-600	3.4	100
133	Ligand binding and gene control characteristics of tandem riboswitches in Bacillus anthracis. *Rna*, **2007**, 13, 573-82	5.8	98
132	Characteristics of the glmS ribozyme suggest only structural roles for divalent metal ions. *Rna*, **2006**, 12, 607-19	5.8	97
131	Inventing and improving ribozyme function: rational design versus iterative selection methods. *Trends in Biotechnology*, **1994**, 12, 268-75	15.1	97
130	Design and antimicrobial action of purine analogues that bind Guanine riboswitches. *ACS Chemical Biology*, **2009**, 4, 915-27	4.9	95
129	Riboswitches and Translation Control. *Cold Spring Harbor Perspectives in Biology*, **2018**, 10,	10.2	93
128	Ligating DNA with DNA. *Journal of the American Chemical Society*, **2004**, 126, 3454-60	16.4	91
127	Riboswitches that sense S-adenosylmethionine and S-adenosylhomocysteine. *Biochemistry and Cell Biology*, **2008**, 86, 157-68	3.6	89
126	Complex riboswitches. *Science*, **2008**, 319, 1795-7	33.3	89
125	The aptamer core of SAM-IV riboswitches mimics the ligand-binding site of SAM-I riboswitches. *Rna*, **2008**, 14, 822-8	5.8	88

124	Confirmation of a second natural preQ1 aptamer class in Streptococcaceae bacteria. *Rna*, **2008**, 14, 685-95	5.8	88
123	Metabolism of Free Guanidine in Bacteria Is Regulated by a Widespread Riboswitch Class. *Molecular Cell*, **2017**, 65, 220-230	17.6	84
122	Emergence of a replicating species from an in vitro RNA evolution reaction. *Proceedings of the National Academy of Sciences of the United States of America*, **1994**, 91, 6093-7	11.5	84
121	Structural diversity of self-cleaving ribozymes. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 5784-9	11.5	83
120	Eukaryotic resistance to fluoride toxicity mediated by a widespread family of fluoride export proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 19018-23	11.5	81
119	Bacterial aptamers that selectively bind glutamine. *RNA Biology*, **2011**, 8, 82-9	4.8	80
118	A variant riboswitch aptamer class for S-adenosylmethionine common in marine bacteria. *Rna*, **2009**, 15, 2046-56	5.8	79
117	Exceptional structured noncoding RNAs revealed by bacterial metagenome analysis. *Nature*, **2009**, 462, 656-9	50.4	77
116	Eukaryotic TPP riboswitch regulation of alternative splicing involving long-distance base pairing. *Nucleic Acids Research*, **2013**, 41, 3022-31	20.1	76
115	Unique glycine-activated riboswitch linked to glycine-serine auxotrophy in SAR11. *Environmental Microbiology*, **2009**, 11, 230-8	5.2	76
114	New families of human regulatory RNA structures identified by comparative analysis of vertebrate genomes. *Genome Research*, **2011**, 21, 1929-43	9.7	76
113	An ancient riboswitch class in bacteria regulates purine biosynthesis and one-carbon metabolism. *Molecular Cell*, **2015**, 57, 317-28	17.6	75
112	A eubacterial riboswitch class that senses the coenzyme tetrahydrofolate. *Chemistry and Biology*, **2010**, 17, 681-5		74
111	Detection of 224 candidate structured RNAs by comparative analysis of specific subsets of intergenic regions. *Nucleic Acids Research*, **2017**, 45, 10811-10823	20.1	73
110	Purine sensing by riboswitches. *Biology of the Cell*, **2008**, 100, 1-11	3.5	73
109	Mechanism for allosteric inhibition of an ATP-sensitive ribozyme. *Nucleic Acids Research*, **1998**, 26, 4214-21	20.1	71
108	Control of bacterial exoelectrogenesis by c-AMP-GMP. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 5389-94	11.5	70
107	The expanding view of RNA and DNA function. *Chemistry and Biology*, **2014**, 21, 1059-65		70

106	Design of allosteric hammerhead ribozymes activated by ligand-induced structure stabilization. *Structure*, **1999**, 7, 783-91	5.2	70
105	Generating new ligand-binding RNAs by affinity maturation and disintegration of allosteric ribozymes. *Rna*, **2001**, 7, 524-36	5.8	68
104	A computational pipeline for high- throughput discovery of cis-regulatory noncoding RNA in prokaryotes. *PLoS Computational Biology*, **2007**, 3, e126	5	66
103	Development and application of a high-throughput assay for glmS riboswitch activators. *RNA Biology*, **2006**, 3, 77-81	4.8	64
102	The lost language of the RNA World. *Science Signaling*, **2017**, 10,	8.8	63
101	Structural, functional, and taxonomic diversity of three preQ1 riboswitch classes. *Chemistry and Biology*, **2014**, 21, 880-889		61
100	Engineering ligand-responsive gene-control elements: lessons learned from natural riboswitches. *Gene Therapy*, **2009**, 16, 1189-201	4	61
99	Molecular recognition of cAMP by an RNA aptamer. *Biochemistry*, **2000**, 39, 8983-92	3.2	60
98	Biochemical Validation of a Second Guanidine Riboswitch Class in Bacteria. *Biochemistry*, **2017**, 56, 352-358	3.2	58
97	Novel riboswitch-binding flavin analog that protects mice against Clostridium difficile infection without inhibiting cecal flora. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 5736-46	5.9	56
96	A highly specialized flavin mononucleotide riboswitch responds differently to similar ligands and confers roseoflavin resistance to Streptomyces davawensis. *Nucleic Acids Research*, **2012**, 40, 8662-73	20.1	56
95	Bioinformatic analysis of riboswitch structures uncovers variant classes with altered ligand specificity. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E2077-E2085	11.5	55
94	Evidence for widespread gene control function by the ydaO riboswitch candidate. *Journal of Bacteriology*, **2010**, 192, 3983-9	3.5	55
93	Biochemical Validation of a Third Guanidine Riboswitch Class in Bacteria. *Biochemistry*, **2017**, 56, 359-363	3.2	54
92	Characteristics of ligand recognition by a glmS self-cleaving ribozyme. *Angewandte Chemie - International Edition*, **2006**, 45, 6689-93	16.4	54
91	Engineered allosteric ribozymes that respond to specific divalent metal ions. *Nucleic Acids Research*, **2005**, 33, 622-31	20.1	53
90	Identification of candidate structured RNAs in the marine organism 'Candidatus Pelagibacter ubique'. *BMC Genomics*, **2009**, 10, 268	4.5	51
89	Challenges of ligand identification for riboswitch candidates. *RNA Biology*, **2011**, 8, 5-10	4.8	51

88	Riboswitches for the alarmone ppGpp expand the collection of RNA-based signaling systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6052-6057	11.5	50
87	Mechanism for gene control by a natural allosteric group I ribozyme. *Rna*, **2011**, 17, 1967-72	5.8	49
86	Biochemical analysis of pistol self-cleaving ribozymes. *Rna*, **2015**, 21, 1852-8	5.8	48
85	Engineering high-speed allosteric hammerhead ribozymes. *Biological Chemistry*, **2007**, 388, 779-86	4.5	46
84	Rapid synthesis of oligoribonucleotides using 2?-O-(o-nitrobenzyloxymethyl)-protected monomers. *Bioorganic and Medicinal Chemistry Letters*, **1992**, 2, 1019-1024	2.9	46
83	An expanded collection and refined consensus model of glmS ribozymes. *Rna*, **2011**, 17, 728-36	5.8	43
82	In vitro selection and characterization of cellulose-binding DNA aptamers. *Nucleic Acids Research*, **2007**, 35, 6378-88	20.1	42
81	Engineered allosteric ribozymes that sense the bacterial second messenger cyclic diguanosyl 5Ŧmonophosphate. *Analytical Chemistry*, **2012**, 84, 4935-41	7.8	41
80	Self-incorporation of coenzymes by ribozymes. *Journal of Molecular Evolution*, **1995**, 40, 551-8	3.1	41
79	Molecular-recognition characteristics of SAM-binding riboswitches. *Angewandte Chemie - International Edition*, **2006**, 45, 964-8	16.4	40
78	A plant 5S ribosomal RNA mimic regulates alternative splicing of transcription factor IIIA pre-mRNAs. *Nature Structural and Molecular Biology*, **2009**, 16, 541-9	17.6	37
77	Tandem riboswitches form a natural Boolean logic gate to control purine metabolism in bacteria. *ELife*, **2018**, 7,	8.9	36
76	Identification of ligand analogues that control c-di-GMP riboswitches. *ACS Chemical Biology*, **2012**, 7, 1436-43	4.9	36
75	Continuous in vitro evolution of bacteriophage RNA polymerase promoters. *Biochemistry*, **1994**, 33, 11980-6	3.2	34
74	A glutamine riboswitch is a key element for the regulation of glutamine synthetase in cyanobacteria. *Nucleic Acids Research*, **2018**, 46, 10082-10094	20.1	31
73	Biochemical analysis of hatchet self-cleaving ribozymes. *Rna*, **2015**, 21, 1845-51	5.8	31
72	New insight on the response of bacteria to fluoride. *Caries Research*, **2012**, 46, 78-81	4.2	29
71	Fluoride enhances the activity of fungicides that destabilize cell membranes. *Bioorganic and Medicinal Chemistry Letters*, **2012**, 22, 3317-22	2.9	28

70	Genome-wide discovery of structured noncoding RNAs in bacteria. *BMC Microbiology*, **2019**, 19, 66	4.5	26
69	Finding non-coding RNAs through genome-scale clustering. *Journal of Bioinformatics and Computational Biology*, **2009**, 7, 373-88	1	26
68	SAM-VI RNAs selectively bind S-adenosylmethionine and exhibit similarities to SAM-III riboswitches. *RNA Biology*, **2018**, 15, 371-378	4.8	26
67	Identification of a large noncoding RNA in extremophilic eubacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 19490-5	11.5	25
66	Challenges of ligand identification for the second wave of orphan riboswitch candidates. *RNA Biology*, **2018**, 15, 377-390	4.8	25
65	The yjdF riboswitch candidate regulates gene expression by binding diverse azaaromatic compounds. *Rna*, **2016**, 22, 530-41	5.8	24
64	A universal adapter for chemical synthesis of DNA or RNA on any single type of solid support. *Tetrahedron Letters*, **1995**, 36, 27-30	2	24
63	Mechanistic Debris Generated by Twister Ribozymes. *ACS Chemical Biology*, **2017**, 12, 886-891	4.9	23
62	Large Noncoding RNAs in Bacteria. *Microbiology Spectrum*, **2018**, 6,	8.9	23
61	Are engineered proteins getting competition from RNA?. *Current Opinion in Biotechnology*, **1996**, 7, 442-8	11.4	23
60	A bacterial riboswitch class for the thiamin precursor HMP-PP employs a terminator-embedded aptamer. *ELife*, **2019**, 8,	8.9	22
59	The Biology of Free Guanidine As Revealed by Riboswitches. *Biochemistry*, **2017**, 56, 345-347	3.2	21
58	Production of single-stranded DNAs by self-cleavage of rolling-circle amplification products. *BioTechniques*, **2013**, 54, 337-43	2.5	21
57	Association of OLE RNA with bacterial membranes via an RNA-protein interaction. *Molecular Microbiology*, **2011**, 79, 21-34	4.1	20
56	Examination of the structural and functional versatility of glmS ribozymes by using in vitro selection. *Nucleic Acids Research*, **2006**, 34, 4968-75	20.1	20
55	Biochemical Validation of a Fourth Guanidine Riboswitch Class in Bacteria. *Biochemistry*, **2020**, 59, 4654-4662	3.2	20
54	Former orphan riboswitches reveal unexplored areas of bacterial metabolism, signaling, and gene control processes. *Rna*, **2020**, 26, 675-693	5.8	19
53	RNA switches out in the cold. *Molecular Cell*, **2010**, 37, 1-2	17.6	19

52	Variant Bacterial Riboswitches Associated with Nucleotide Hydrolase Genes Sense Nucleoside Diphosphates. *Biochemistry*, **2019**, 58, 401-410	3.2	18
51	Mechanism and distribution of glmS ribozymes. *Methods in Molecular Biology*, **2012**, 848, 113-29	1.4	18
50	Evidence that the motif is a bacterial riboswitch for the ubiquitous enzyme cofactor NAD. *Rna*, **2019**, 25, 1616-1627	5.8	17
49	In vitro selection of kinase and ligase deoxyribozymes. *Methods*, **2001**, 23, 179-90	4.6	17
48	Integron attI1 sites, not riboswitches, associate with antibiotic resistance genes. *Cell*, **2013**, 153, 1417-8	56.2	16
47	OLE RNA protects extremophilic bacteria from alcohol toxicity. *Nucleic Acids Research*, **2012**, 40, 6898-907	10.1	16
46	Selection in vitro of allosteric ribozymes. *Methods in Molecular Biology*, **2004**, 252, 145-64	1.4	16
45	Singlet glycine riboswitches bind ligand as well as tandem riboswitches. *Rna*, **2016**, 22, 1728-1738	5.8	16
44	Small molecule fluoride toxicity agonists. *Chemistry and Biology*, **2015**, 22, 527-534		15
43	In vitro selection and characterization of cellulose-binding RNA aptamers using isothermal amplification. *Nucleosides, Nucleotides and Nucleic Acids*, **2008**, 27, 949-66	1.4	15
42	Substrate specificity and reaction kinetics of an X-motif ribozyme. *Rna*, **2003**, 9, 688-97	5.8	15
41	Bacterial Riboswitch Discovery and Analysis433-454		13
40	Rare variants of the FMN riboswitch class in and other bacteria exhibit altered ligand specificity. *Rna*, **2019**, 25, 23-34	5.8	12
39	Biochemical validation of a second class of tetrahydrofolate riboswitches in bacteria. *Rna*, **2019**, 25, 1091-8097	5.8	10
38	A bacterial riboswitch class senses xanthine and uric acid to regulate genes associated with purine oxidation. *Rna*, **2020**, 26, 960-968	5.8	9
37	Numerous small hammerhead ribozyme variants associated with Penelope-like retrotransposons cleave RNA as dimers. *RNA Biology*, **2017**, 14, 1499-1507	4.8	9
36	Identification of 15 candidate structured noncoding RNA motifs in fungi by comparative genomics. *BMC Genomics*, **2017**, 18, 785	4.5	8
35	Gramicidin D enhances the antibacterial activity of fluoride. *Bioorganic and Medicinal Chemistry Letters*, **2014**, 24, 2969-2971	2.9	8

34	A second riboswitch class for the enzyme cofactor NAD. *Rna*, **2021**, 27, 99-105	5.8	8
33	In vitro selection of allosteric ribozymes that sense the bacterial second messenger c-di-GMP. *Methods in Molecular Biology*, **2014**, 1111, 209-20	1.4	8
32	Employing a ZTP Riboswitch to Detect Bacterial Folate Biosynthesis Inhibitors in a Small Molecule High-Throughput Screen. *ACS Chemical Biology*, **2019**, 14, 2841-2850	4.9	7
31	Improved genetic transformation methods for the model alkaliphile Bacillus halodurans C-125. *Letters in Applied Microbiology*, **2011**, 52, 430-2	2.9	7
30	Molecular-Recognition Characteristics of SAM-Binding Riboswitches. *Angewandte Chemie*, **2006**, 118, 978-982	3.6	6
29	Characteristics of Ligand Recognition by a glmS Self-Cleaving Ribozyme. *Angewandte Chemie*, **2006**, 118, 6841-6845	3.6	6
28	Polynucleotide phosphorylase forms polymers from an ADP analog in which the 5Toxygen is replaced by a methylene group. *Nucleic Acids Research*, **1990**, 18, 3085-6	20.1	6
27	The Biochemical Landscape of Riboswitch Ligands.. *Biochemistry*, **2022**,	3.2	6
26	RNA Second Messengers and Riboswitches: Relics from the RNA World?. *Microbe Magazine*, **2010**, 5, 13-20		6
25	Comprehensive discovery of novel structured noncoding RNAs in 26 bacterial genomes. *RNA Biology*, **2021**, 18, 2417-2432	4.8	6
24	The case of the missing allosteric ribozymes. *Nature Chemical Biology*, **2021**, 17, 375-382	11.7	6
23	Search for 5Tleader regulatory RNA structures based on gene annotation aided by the RiboGap database. *Methods*, **2017**, 117, 3-13	4.6	4
22	A second RNA-binding protein is essential for ethanol tolerance provided by the bacterial OLE ribonucleoprotein complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E6319-E6328	11.5	4
21	Riboswitches That Sense Cyclic Di-GMP **2014**, 215-229		3
20	Disruption of the OLE ribonucleoprotein complex causes magnesium toxicity in Bacillus halodurans. *Molecular Microbiology*, **2019**, 112, 1552-1563	4.1	2
19	In vitro selection of deoxyribozymes with DNA capping activity. *Nucleic Acids Symposium Series*, **1999**, 237-8		2
18	Witnessing the structural evolution of an RNA enzyme. *ELife*, **2021**, 10,	8.9	2
17	Riboswitches: Regulators of modern and ancient metabolism. *Biochemist*, **2006**, 28, 11-15	0.5	1

16	In vitro selection of glmS ribozymes. *Methods in Molecular Biology*, **2009**, 540, 349-64	1.4	1
15	Genome-wide Discovery of Rare Riboswitches in Bacteria. *FASEB Journal*, **2019**, 33, 778.8	0.9	1
14	OapB forms a high-affinity complex with the P13 region of the noncoding RNA OLE. *Journal of Biological Chemistry*, **2020**, 295, 9326-9334	5.4	1
13	A rare bacterial RNA motif is implicated in the regulation of the gene whose encoded enzyme synthesizes phosphoribosylamine. *Rna*, **2020**, 26, 1838-1846	5.8	1
12	DIMPL: a bioinformatics pipeline for the discovery of structured noncoding RNA motifs in bacteria. *Bioinformatics*, **2021**,	7.2	1
11	Natural circularly permuted group II introns in bacteria produce RNA circles.. *IScience*, **2021**, 24, 103431	6.1	1
10	Large Noncoding RNAs in Bacteria **2018**, 515-526		0
9	Riboswitches: Natural Metabolite-binding RNAs Controlling Gene Expression **2006**, 191-207		
8	Selection for catalytic function with nucleic acids. *Current Protocols in Nucleic Acid Chemistry*, **2001**, Chapter 9, Unit 9.4	0.5	
7	Riboswitches as Genetic Control Elements **2006**, 89-106		
6	Genetic control by riboswitches and ribozymes. *FASEB Journal*, **2006**, 20, A455	0.9	
5	Riboswitches as new antibiotics targets. *FASEB Journal*, **2008**, 22, 264.3	0.9	
4	High Throughput Validation of Orphan Riboswitch Candidates. *FASEB Journal*, **2018**, 32, lb18	0.9	
3	A plant 5S rRNA mimic regulates alternative splicing of transcription factor IIIA pre-mRNAs. *FASEB Journal*, **2009**, 23, 665.4	0.9	
2	The large, noncoding OLE RNA is associated with membrane biochemistry. *FASEB Journal*, **2010**, 24, 493.2	0.9	
1	Ribozyme Discovery in Bacteria **2021**, 281-302		