Paul Babitzke

List of Publications by Year
in descending order

106 papers	9,224 citations	34105 52 h-index	42399 92 g-index
110 all docs	110 docs citations	110 times ranked	4327 citing authors

#	Article	IF	Citations
1	New method for generating deletions and gene replacements in Escherichia coli. Journal of Bacteriology, 1989, 171, 4617-4622.	2.2	713
2	CsrB sRNA family: sequestration of RNA-binding regulatory proteins. Current Opinion in Microbiology, 2007, 10, 156-163.	5.1	387
3	A novel sRNA component of the carbon storage regulatory system of <i>Escherichia coli</i>. Molecular Microbiology, 2003, 48, 657-670.	2.5	364
4	Positive regulation of motility and flhDC expression by the RNA-binding protein CsrA of Escherichia coli. Molecular Microbiology, 2001, 40, 245-256.	2.5	359
5	Regulation of Bacterial Virulence by Csr (Rsm) Systems. Microbiology and Molecular Biology Reviews, 2015, 79, 193-224.	6.6	309
6	The Ams (altered mRNA stability) protein and ribonuclease E are encoded by the same structural gene of Escherichia coli.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 1-5.	7.1	301
7	CsrA postâ€transcriptionally represses <i>pgaABCD</i>, responsible for synthesis of a biofilm polysaccharide adhesin of <i>Escherichia coli</i>. Molecular Microbiology, 2005, 56, 1648-1663.	2.5	280
8	Postâ€transcriptional regulation on a global scale: form and function of Csr/Rsm systems. Environmental Microbiology, 2013, 15, 313-324.	3.8	264
9	Regulatory Circuitry of the CsrA/CsrB and BarA/UvrY Systems of<i>Escherichia coli</i>. Journal of Bacteriology, 2002, 184, 5130-5140.	2.2	257
10	CsrA regulates glycogen biosynthesis by preventing translation of glgC in Escherichia coli. Molecular Microbiology, 2002, 44, 1599-1610.	2.5	257
11	RNA sequence and secondary structure participate in high-affinity CsrAâ€"RNA interaction. Rna, 2005, 11, 1579-1587.	3.5	253
12	Identification of a novel regulatory protein (CsrD) that targets the global regulatory RNAs CsrB and CsrC for degradation by RNase E. Genes and Development, 2006, 20, 2605-2617.	5.9	252
13	CsrA Regulates Translation of the Escherichia coli Carbon Starvation Gene, cstA , by Blocking Ribosome Access to the cstA Transcript. Journal of Bacteriology, 2003, 185, 4450-4460.	2.2	174
14	<scp>CsrA</scp> activates <scp><i>flhDC</i></scp> expression by protecting <scp><i>flhDC</i></scp> m<scp>RNA</scp> from <scp>RN</scp>ase <scp>E</scp>â€mediated cleavage. Molecular Microbiology, 2013, 87, 851-866.	2.5	169
15	Circuitry linking the Csr and stringent response global regulatory systems. Molecular Microbiology, 2011, 80, 1561-1580.	2.5	162
16	Global role of the bacterial post-transcriptional regulator CsrA revealed by integrated transcriptomics. Nature Communications, 2017, 8, 1596.	12.8	157
17	Global Regulation by CsrA and Its RNA Antagonists. Microbiology Spectrum, 2018, 6, .	3.0	148
18	Complexity in Regulation of Tryptophan Biosynthesis inBacillus subtilis. Annual Review of Genetics, 2005, 39, 47-68.	7.6	143

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19	Integration of a complex regulatory cascade involving the SirA/BarA and Csr global regulatory systems that controls expression of the <i>Salmonella</i> SPIâ€1 and SPIâ€2 virulence regulons through HilD. Molecular Microbiology, 2011, 80, 1637-1656.	2.5	138
20	Reconstitution of Bacillus subtilis trp attenuation in vitro with TRAP, the trp RNA-binding attenuation protein.. Proceedings of the National Academy of Sciences of the United States of America, 1993, 90, 133-137.	7.1	134
21	Regulatory Interactions of Csr Components: the RNA Binding Protein CsrA Activates csrB Transcription in Escherichia coli. Journal of Bacteriology, 2001, 183, 6017-6027.	2.2	134
22	CsrA Inhibits Translation Initiation of <i>Escherichia coli hfq</i> by Binding to a Single Site Overlapping the Shine-Dalgarno Sequence. Journal of Bacteriology, 2007, 189, 5472-5481.	2.2	124
23	Analysis of mRNA decay and rRNA processing in Escherichia coli multiple mutants carrying a deletion in RNase III. Journal of Bacteriology, 1993, 175, 229-239.	2.2	118
24	Regulation of Translation Initiation by RNA Binding Proteins. Annual Review of Microbiology, 2009, 63, 27-44.	7.3	112
25	CsrA-FliW interaction governs flagellin homeostasis and a checkpoint on flagellar morphogenesis in Bacillus subtilis. Molecular Microbiology, 2011, 82, 447-461.	2.5	104
26	Comprehensive Alanine-scanning Mutagenesis ofEscherichia coliCsrA Defines Two Subdomains of Critical Functional Importance. Journal of Biological Chemistry, 2006, 281, 31832-31842.	3.4	103
27	Molecular Geometry of CsrA (RsmA) Binding to RNA and Its Implications for Regulated Expression. Journal of Molecular Biology, 2009, 392, 511-528.	4.2	103
28	trp RNA-binding attenuation protein (TRAP)-trp leader RNA interactions mediate translational as well as transcriptional regulation of the Bacillus subtilis trp operon. Journal of Bacteriology, 1995, 177, 6362-6370.	2.2	99
29	CsrA ofBacillus subtilisregulates translation initiation of the gene encoding the flagellin protein (hag) by blocking ribosome binding. Molecular Microbiology, 2007, 64, 1605-1620.	2.5	92
30	Complex regulation of the global regulatory gene <i>csrA</i>: CsrAâ€mediated translational repression, transcription from five promoters by EÏƒ⁷⁰ and EÏƒ^S, and indirect transcriptional activation by CsrA. Molecular Microbiology, 2011, 81, 689-704.	2.5	92
31	Mechanism of <i>hcnA</i> mRNA recognition in the Gac/Rsm signal transduction pathway of <i>Pseudomonas fluorescens</i>. Molecular Microbiology, 2007, 66, 341-356.	2.5	90
32	NusA-stimulated RNA polymerase pausing and termination participates in the <i>Bacillus subtilis trp</i> operon attenuation mechanism <i>in</i> <i>vitro</i>. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 11067-11072.	7.1	88
33	trp RNA-binding Attenuation Protein-mediated Long Distance RNA Refolding Regulates Translation of trpE inBacillus subtilis. Journal of Biological Chemistry, 1998, 273, 20494-20503.	3.4	84
34	Regulation of tryptophan biosynthesis: Trpâ€ing the TRAP or how Bacillus subtilis reinvented the wheel. Molecular Microbiology, 1997, 26, 1-9.	2.5	81
35	Transcription attenuation. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 2002, 1577, 240-250.	2.4	80
36	Posttranscription Initiation Control of Tryptophan Metabolism in <i>Bacillus subtilis</i> by the <i>trp</i> RNA-Binding Attenuation Protein (TRAP), anti-TRAP, and RNA Structure. Journal of Bacteriology, 2001, 183, 5795-5802.	2.2	77

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37	TRAP, the trp RNA-binding attenuation protein of Bacillus subtilis, is a toroid-shaped molecule that binds transcripts containing GAG or UAG repeats separated by two nucleotides.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 7916-7920.	7.1	73
38	Dual Posttranscriptional Regulation via a Cofactor-Responsive mRNA Leader. Journal of Molecular Biology, 2013, 425, 3662-3677.	4.2	73
39	A Genome-Wide Analysis of Small Regulatory RNAs in the Human Pathogen Group A Streptococcus. PLoS ONE, 2009, 4, e7668.	2.5	71
40	The trp RNA-binding attenuation protein regulates TrpG synthesis by binding to the trpG ribosome binding site of Bacillus subtilis. Journal of Bacteriology, 1997, 179, 2582-2586.	2.2	69
41	NusA-dependent transcription termination prevents misregulation of global gene expression. Nature Microbiology, 2016, 1, 15007.	13.3	68
42	Translational Repression of NhaR, a Novel Pathway for Multi-Tier Regulation of Biofilm Circuitry by CsrA. Journal of Bacteriology, 2012, 194, 79-89.	2.2	67
43	Regulation of transcription attenuation and translation initiation by allosteric control of an RNA-binding protein: the Bacillus subtilis TRAP protein. Current Opinion in Microbiology, 2004, 7, 132-139.	5.1	64
44	The mtrAB operon of Bacillus subtilis encodes GTP cyclohydrolase I (MtrA), an enzyme involved in folic acid biosynthesis, and MtrB, a regulator of tryptophan biosynthesis. Journal of Bacteriology, 1992, 174, 2059-2064.	2.2	63
45	NusG Is a Sequence-specific RNA Polymerase Pause Factor That Binds to the Non-template DNA within the Paused Transcription Bubble. Journal of Biological Chemistry, 2016, 291, 5299-5308.	3.4	63
46	Regulation of CsrB/C sRNA decay by EIIA^{Glc} of the phosphoenolpyruvate: carbohydrate phosphotransferase system. Molecular Microbiology, 2016, 99, 627-639.	2.5	62
47	Myotonic dystrophy: Molecular windows on a complex etiology. Nucleic Acids Research, 1998, 26, 1363-1368.	14.5	59
48	The trp RNA-Binding Attenuation Protein of Bacillus subtilis Regulates Translation of the Tryptophan Transport Gene trpP (yhaG) by Blocking Ribosome Binding. Journal of Bacteriology, 2004, 186, 278-286.	2.2	59
49	Function of the <i>Bacillus subtilis</i> transcription elongation factor NusG in hairpin-dependent RNA polymerase pausing in the <i>trp</i> leader. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16131-16136.	7.1	58
50	Global effects of the <scp>DEAD</scp>â€box <scp>RNA</scp> helicase <scp>DeaD</scp> (<scp>CsdA</scp>) on gene expression over a broad range of temperatures. Molecular Microbiology, 2014, 92, 945-958.	2.5	58
51	Interaction of the trp RNA-Binding attenuation protein (TRAP) of Bacillus subtilis with RNA: effects of the number of GAG repeats, the nucleotides separating adjacent repeats, and RNA secondary structure. Journal of Bacteriology, 1996, 178, 5159-5163.	2.2	56
52	Effects of Mutations in the l-Tryptophan Binding Pocket of the trp RNA-binding Attenuation Protein ofBacillus subtilis. Journal of Biological Chemistry, 2000, 275, 4519-4524.	3.4	55
53	FliW and FliS Function Independently To Control Cytoplasmic Flagellin Levels in Bacillus subtilis. Journal of Bacteriology, 2013, 195, 297-306.	2.2	55
54	Antagonistic control of the turnover pathway for the global regulatory sRNA CsrB by the CsrA and CsrD proteins. Nucleic Acids Research, 2016, 44, 7896-7910.	14.5	54

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55	Posttranscription Initiation Control of Gene Expression Mediated by Bacterial RNA-Binding Proteins. Annual Review of Microbiology, 2019, 73, 43-67.	7.3	53
56	Diverse Mechanisms and Circuitry for Global Regulation by the RNA-Binding Protein CsrA. Frontiers in Microbiology, 2020, 11, 601352.	3.5	48
57	CsrA Represses Translation of <i>sdiA</i> , Which Encodes the <i>N</i> -Acylhomoserine- <scp>l</scp> -Lactone Receptor of Escherichia coli, by Binding Exclusively within the Coding Region of <i>sdiA</i> mRNA. Journal of Bacteriology, 2011, 193, 6162-6170.	2.2	47
58	Recycling of a regulatory protein by degradation of the RNA to which it binds. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 2747-2751.	7.1	46
59	Circuitry Linking the Catabolite Repression and Csr Global Regulatory Systems of Escherichia coli. Journal of Bacteriology, 2016, 198, 3000-3015.	2.2	45
60	The Anti-trp RNA-binding Attenuation Protein (Anti-TRAP), AT, Recognizes the Tryptophan-activated RNA Binding Domain of the TRAP Regulatory Protein. Journal of Biological Chemistry, 2002, 277, 10608-10613.	3.4	44
61	Expression of the <i>Bacillus subtilis trpEDCFBA</i> Operon Is Influenced by Translational Coupling and Rho Termination Factor. Journal of Bacteriology, 2001, 183, 5918-5926.	2.2	43
62	NusG/Spt5: are there common functions of this ubiquitous transcription elongation factor?. Current Opinion in Microbiology, 2014, 18, 68-71.	5.1	43
63	Gel Mobility Shift Assays to Detect Proteinâ€“RNA Interactions. Methods in Molecular Biology, 2012, 905, 201-211.	0.9	41
64	FliW antagonizes CsrA RNA binding by a noncompetitive allosteric mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9870-9875.	7.1	41
65	RNA Polymerase Pausing Regulates Translation Initiation by Providing Additional Time for TRAP-RNA Interaction. Molecular Cell, 2006, 24, 547-557.	9.7	39
66	Translational Repression of the RpoS Antiadapter IraD by CsrA Is Mediated via Translational Coupling to a Short Upstream Open Reading Frame. MBio, 2017, 8, .	4.1	38
67	Glyoxals as in vivo RNA structural probes of guanine base-pairing. Rna, 2018, 24, 114-124.	3.5	38
68	NusG controls transcription pausing and RNA polymerase translocation throughout the <i>Bacillus subtilis</i> genome. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 21628-21636.	7.1	38
69	Structural Features of L-Tryptophan Required for Activation of TRAP, the trp RNA-binding Attenuation Protein of Bacillus subtilis. Journal of Biological Chemistry, 1995, 270, 12452-12456.	3.4	37
70	Mechanism of NusG-stimulated pausing, hairpin-dependent pause site selection and intrinsic termination at overlapping pause and termination sites in the Bacillus subtilis trp leader. Molecular Microbiology, 2010, 76, 690-705.	2.5	37
71	In vivo RNA structural probing of uracil and guanine base-pairing by 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC). Rna, 2019, 25, 147-157.	3.5	37
72	<i>csrR</i> , a Paralog and Direct Target of CsrA, Promotes Legionella pneumophila Resilience in Water. MBio, 2015, 6, e00595.	4.1	32

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73	The <i>Escherichia coli mrsC</i> Gene Is Required for Cell Growth and mRNA Decay. Journal of Bacteriology, 1998, 180, 1920-1928.	2.2	32
74	CsrA Participates in a PNPase Autoregulatory Mechanism by Selectively Repressing Translation of <i>pnp</i> Transcripts That Have Been Previously Processed by RNase III and PNPase. Journal of Bacteriology, 2015, 197, 3751-3759.	2.2	30
75	A 5â€² RNA Stem-Loop Participates in the Transcription Attenuation Mechanism That Controls Expression of the <i>Bacillus subtilis trpEDCFBA</i> Operon. Journal of Bacteriology, 1999, 181, 5742-5749.	2.2	29
76	Circuitry Linking the Global Csr- and Ïƒ ^E -Dependent Cell Envelope Stress Response Systems. Journal of Bacteriology, 2017, 199, .	2.2	27
77	Regulation of Iron Storage by CsrA Supports Exponential Growth of Escherichia coli. MBio, 2019, 10, .	4.1	27
78	NusG is an intrinsic transcription termination factor that stimulates motility and coordinates gene expression with NusA. ELife, 2021, 10, .	6.0	27
79	trp RNA-Binding Attenuation Protein-5â€² Stem-Loop RNA Interaction Is Required for Proper Transcription Attenuation Control of the Bacillus subtilis trpEDCFBA Operon. Journal of Bacteriology, 2000, 182, 1819-1827.	2.2	25
80	The trp RNA-binding attenuation protein (TRAP) of Bacillus subtilis regulates translation initiation of ycbK, a gene encoding a putative efflux protein, by blocking ribosome binding. Molecular Microbiology, 2006, 61, 1252-1266.	2.5	22
81	Comprehensive Alanine-scanning Mutagenesis of Escherichia coli CsrA Defines Two Subdomains of Critical Functional Importance. Journal of Biological Chemistry, 2006, 281, 31832-31842.	3.4	22
82	A Mg2+-dependent RNA Tertiary Structure Forms in the Bacillus subtilis trp Operon Leader Transcript and Appears to Interfere with trpE Translation Control by Inhibiting TRAP Binding. Journal of Molecular Biology, 2003, 332, 555-574.	4.2	21
83	Ribosomal protein L10(L12)₄autoregulates expression of the<i>Bacillus subtilis rplJL</i>operon by a transcription attenuation mechanism. Nucleic Acids Research, 2015, 43, 7032-7043.	14.5	20
84	CsrA-Mediated Translational Activation of <i>ymdA</i> Expression in Escherichia coli. MBio, 2020, 11, .	4.1	20
85	NusG-Dependent RNA Polymerase Pausing and Tylosin-Dependent Ribosome Stalling Are Required for Tylosin Resistance by Inducing 23S rRNA Methylation in Bacillus subtilis. MBio, 2019, 10, .	4.1	18
86	NusG-dependent RNA polymerase pausing is a frequent function of this universally conserved transcription elongation factor. Critical Reviews in Biochemistry and Molecular Biology, 2020, 55, 716-728.	5.2	18
87	Examination of Csr regulatory circuitry using epistasis analysis with RNA-seq (Epi-seq) confirms that CsrD affects gene expression via CsrA, CsrB and CsrC. Scientific Reports, 2018, 8, 5373.	3.3	17
88	CsrA regulation via binding to the baseâ€pairing small RNA Spot 42. Molecular Microbiology, 2022, 117, 32-53.	2.5	17
89	Aromatic Amino Acid Metabolism in Bacillus subtilis. , 0, , 233-244.		16
90	Role of RNA Structure in Transcription Attenuation in Bacillus subtilis: The trpEDCFBA Operon as a Model System. Methods in Enzymology, 2003, 371, 392-404.	1.0	15

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91	Structure-seq2 probing of RNA structure upon amino acid starvation reveals both known and novel RNA switches in <i>Bacillus subtilis</i>. Rna, 2020, 26, 1431-1447.	3.5	15
92	Expression of <i>Bacillus subtilis</i> ABCF antibiotic resistance factor VmlR is regulated by RNA polymerase pausing, transcription attenuation, translation attenuation and (p)ppGpp. Nucleic Acids Research, 2022, 50, 6174-6189.	14.5	15
93	Gene replacement method for determining conditions in which Bacillus subtilis genes are essential or dispensable for cell viability. Applied Microbiology and Biotechnology, 2004, 64, 382-386.	3.6	14
94	TRAP-5â€² stemâ€"loop interaction increases the efficiency of transcription termination in the <i>Bacillus subtilis trpEDCFBA</i> operon leader region. Rna, 2007, 13, 2020-2033.	3.5	14
95	Modular Organization of the NusA- and NusG-Stimulated RNA Polymerase Pause Signal That Participates in the Bacillus subtilis trp Operon Attenuation Mechanism. Journal of Bacteriology, 2017, 199, .	2.2	14
96	Translation Control of trpG from Transcripts Originating from the Folate Operon Promoter of Bacillus subtilis Is Influenced by Translation-Mediated Displacement of Bound TRAP, While Translation Control of Transcripts Originating from a Newly Identified trpG Promoter Is Not. Journal of Bacteriology, 2007, 189, 872-879.	2.2	12
97	An incoherent feedforward loop formed by SirA/BarA, HilE and HilD is involved in controlling the growth cost of virulence factor expression by Salmonella Typhimurium. PLoS Pathogens, 2021, 17, e1009630.	4.7	12
98	Molecular basis of TRAPâ€"5â€²SL RNA interaction in the <i>Bacillus subtilis trp</i> operon transcription attenuation mechanism. Rna, 2009, 15, 55-66.	3.5	9
99	Toxin MqsR cleaves singleâ€stranded <scp>mRNA</scp> with various 5' ends. MicrobiologyOpen, 2016, 5, 370-377.	3.0	9
100	Transcriptome-Wide Effects of NusA on RNA Polymerase Pausing in Bacillus subtilis. Journal of Bacteriology, 2022, 204, e0053421.	2.2	9
101	Global Regulation by CsrA and Its RNA Antagonists. , 2018, , 339-354.		5
102	Csr (Rsm) System and Its Overlap and Interplay with Cyclic Di-GMP Regulatory Systems. , 2014, , 201-214.		4
103	Noncanonical Translation Initiation Comes of Age. Journal of Bacteriology, 2017, 199, .	2.2	4
104	Phylogenetic conservation of RNA secondary and tertiary structure in the trpEDCFBA operon leader transcript in Bacillus. Rna, 2003, 9, 1502-1515.	3.5	3
105	Analysis of mRNA Decay Intermediates in Bacillus subtilis 3â€² Exoribonuclease and RNA Helicase Mutant Strains. MBio, 2022, 13, e0040022.	4.1	3
106	Eliminating blurry bands in gels with a simple cost-effective repair to the gel cassette. Rna, 2016, 22, 1929-1930.	3.5	1