Sidney R Kushner

List of Publications by Year
in descending order

125 papers	10,724 citations	38720 50 h-index	32815 100 g-index
129 all docs	129 docs citations	129 times ranked	5161 citing authors

#	Article	IF	Citations
1	Construction of versatile low-copy-number vectors for cloning, sequencing and gene expression in Escherichia coli. Gene, 1991, 100, 195-199.	1.0	1,102
2	New method for generating deletions and gene replacements in Escherichia coli. Journal of Bacteriology, 1989, 171, 4617-4622.	1.0	713
3	Polynucleotide phosphorylase and ribonuclease II are required for cell viability and mRNA turnover in Escherichia coli K-12.. Proceedings of the National Academy of Sciences of the United States of America, 1986, 83, 120-124.	3.3	429
4	Genetic Recombination in Escherichia coli: The Role of Exonuclease I. Proceedings of the National Academy of Sciences of the United States of America, 1971, 68, 824-827.	3.3	376
5	Efficient transformation of Neurospora crassa by utilizing hybrid plasmid DNA. Proceedings of the National Academy of Sciences of the United States of America, 1979, 76, 5259-5263.	3.3	331
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.	3.3	301
7	Escherichia coli peptide methionine sulfoxide reductase gene: regulation of expression and role in protecting against oxidative damage. Journal of Bacteriology, 1995, 177, 502-507.	1.0	275
8	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.	2.7	252
9	Polynucleotide phosphorylase functions both as a 3' right-arrow 5' exonuclease and a poly(A) polymerase in Escherichiacoli. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 11966-11971.	3.3	245
10	Polyadenylylation helps regulate mRNA decay in Escherichia coli.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 1807-1811.	3.3	242
11	RNA Methylation under Heat Shock Control. Molecular Cell, 2000, 6, 349-360.	4.5	228
12	Involvement of helicase II (uvrD gene product) and DNA polymerase I in excision mediated by the uvrABC protein complex.. Proceedings of the National Academy of Sciences of the United States of America, 1985, 82, 4925-4929.	3.3	225
13	Stabilization of discrete mRNA breakdown products in ams pnp rnb multiple mutants of Escherichia coli K-12. Journal of Bacteriology, 1988, 170, 4625-4633.	1.0	220
14	mRNA Decay in Escherichia coli Comes of Age. Journal of Bacteriology, 2002, 184, 4658-4665.	1.0	216
15	The Sm-like protein Hfq regulates polyadenylation dependent mRNA decay in Escherichia coli. Molecular Microbiology, 2004, 54, 905-920.	1.2	190
16	Initiation of tRNA maturation by RNase E is essential for cell viability in E. coli. Genes and Development, 2002, 16, 1102-1115.	2.7	187
17	Indirect Suppression of recB and recC Mutations by Exonuclease I Deficiency. Proceedings of the National Academy of Sciences of the United States of America, 1972, 69, 1366-1370.	3.3	161
18	Enzymic repair of DNA. III. Properties of the uv-endonuclease and uv-exonuclease. Biochemistry, 1971, 10, 3315-3324.	1.2	153

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19	RNA snap â„¢: a rapid, quantitative and inexpensive, method for isolating total RNA from bacteria. Nucleic Acids Research, 2012, 40, e156-e156.	6.5	145
20	Recombinant levels of Escherichia coli K-12 mutants deficient in various replication, recombination, or repair genes. Journal of Bacteriology, 1978, 134, 958-966.	1.0	144
21	Isolation of Exonuclease VIII: The Enzyme Associated with the sbcA Indirect Suppressor. Proceedings of the National Academy of Sciences of the United States of America, 1974, 71, 3593-3597.	3.3	131
22	Analysis of mRNA decay and rRNA processing in Escherichia coli in the absence of RNase E-based degradosome assembly. Molecular Microbiology, 2000, 38, 854-866.	1.2	128
23	Analysis of the function of Escherichia coli poly(A) polymerase I in RNA metabolism. Molecular Microbiology, 1999, 34, 1094-1108.	1.2	127
24	Identification, cloning, and expression of bolA, an ftsZ-dependent morphogene of Escherichia coli. Journal of Bacteriology, 1988, 170, 5169-5176.	1.0	126
25	Identification and characterization of recombinant plasmids carrying the complete qa gene cluster from Neurospora crassa including the qa-1+ regulatory gene.. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 5086-5090.	3.3	125
26	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.	1.0	118
27	Expression in Escherichia coli K-12 of the structural gene for catabolic dehydroquinase of Neurospora crassa. Proceedings of the National Academy of Sciences of the United States of America, 1977, 74, 3508-3512.	3.3	116
28	Analysis of Escherichia coli RNase E and RNase III activity in vivo using tiling microarrays. Nucleic Acids Research, 2011, 39, 3188-3203.	6.5	112
29	ENZYMATIC REPAIR OF DNA, I. PURIFICATION OF TWO ENZYMES INVOLVED IN THE EXCISION OF THYMINE DIMERS FROM ULTRAVIOLET-IRRADIATED DNA. Proceedings of the National Academy of Sciences of the United States of America, 1969, 63, 144-151.	3.3	108
30	DNA repair in Escherichia coli: identification of the uvrD gene product.. Proceedings of the National Academy of Sciences of the United States of America, 1982, 79, 5616-5620.	3.3	103
31	Genomic analysis in Escherichia coli demonstrates differential roles for polynucleotide phosphorylase and RNase II in mRNA abundance and decay. Molecular Microbiology, 2003, 50, 645-658.	1.2	102
32	Regulation of mRNA Decay in Bacteria. Annual Review of Microbiology, 2016, 70, 25-44.	2.9	102
33	GENETIC ANALYSIS OF MUTATIONS INDIRECTLY SUPPRESSING <i>recB</i> AND <i>recC</i> MUTATIONS. Genetics, 1972, 72, 205-215.	1.2	99
34	In Vivo Studies of Temperature-Sensitive recB and recC Mutants. Journal of Bacteriology, 1974, 120, 1213-1218.	1.0	99
35	The majority of Escherichia coli mRNAs undergo post-transcriptional modification in exponentially growing cells. Nucleic Acids Research, 2006, 34, 5695-5704.	6.5	97
36	mRNA Decay in Prokaryotes and Eukaryotes: Different Approaches to a Similar Problem. IUBMB Life, 2004, 56, 585-594.	1.5	93

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37	The role of the â€˜gearboxâ€™ in the transcription of essential genes. Molecular Microbiology, 1991, 5, 2085-2091.	1.2	89
38	Polynucleotide phosphorylase, RNase II and RNase E play different roles in the in vivo modulation of polyadenylation in Escherichia coli. Molecular Microbiology, 2000, 36, 982-994.	1.2	82
39	Physical and biochemical analysis of the cloned recB and recC genes of Escherichia coli K-12. Journal of Bacteriology, 1984, 157, 21-27.	1.0	79
40	Enzymic repair of deoxyribonucleic acid. IV. Mechanism of photoproduct excision. Biochemistry, 1971, 10, 3325-3334.	1.2	78
41	Chloroplast ribosomal RNA genes in Euglena gracilis exist as three clustered tandem repeats. Gene, 1978, 3, 191-209.	1.0	77
42	Analysis of genetic recombination between two partially deleted lactose operons of Escherichia coli K-12. Journal of Bacteriology, 1977, 131, 123-132.	1.0	77
43	Construction and analysis of deletions in the structural gene (uvrD) for DNA helicase II of Escherichia coli. Journal of Bacteriology, 1991, 173, 2569-2575.	1.0	76
44	Bacterial/archaeal/organellar polyadenylation. Wiley Interdisciplinary Reviews RNA, 2011, 2, 256-276.	3.2	74
45	RNase Z in Escherichia coli plays a significant role in mRNA decay. Molecular Microbiology, 2006, 60, 723-737.	1.2	72
46	Physical and biochemical characterization of cloned sbcB and xonA mutations from Escherichia coli K-12. Journal of Bacteriology, 1988, 170, 2089-2094.	1.0	65
47	Amplification of ribonuclease II(mb) activity inEscherichia coliK-12. Nucleic Acids Research, 1983, 11, 265-276.	6.5	60
48	Genetic organization and transcriptional regulation in the qa gene cluster of Neurospora crassa.. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 5783-5787.	3.3	59
49	RNase G of Escherichia coli exhibits only limited functional overlap with its essential homologue, RNase E. Molecular Microbiology, 2004, 49, 607-622.	1.2	59
50	Amplification in Escherichia coli of enzymes involved in genetic recombination: construction of hybrid ColE1 plasmids carrying the structural gene for exonuclease I.. Proceedings of the National Academy of Sciences of the United States of America, 1976, 73, 3492-3496.	3.3	57
51	Development of an in vitro mRNA decay system for Escherichia coli: Poly(A) polymerase I is necessary to trigger degradation. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 12926-12931.	3.3	56
52	Exonucleases I, III, and V are required for stability of ColE1-related plasmids in Escherichia coli. Journal of Bacteriology, 1984, 157, 661-664.	1.0	55
53	Polyadenylation helps regulate functional tRNA levels in Escherichia coli. Nucleic Acids Research, 2012, 40, 4589-4603.	6.5	54
54	Differential Thermolability of Exonuclease and Endonuclease Activities of the <i>recBC</i> Nuclease Isolated from Thermosensitive <i>recB</i> and <i>recC</i> Mutants. Journal of Bacteriology, 1974, 120, 1219-1222.	1.0	53

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55	Transcription of theuvrDgene ofEscherichia coliis controlled by thelexArepressor and by attenuation. Nucleic Acids Research, 1983, 11, 8625-8640.	6.5	50
56	Ribonuclease P processes polycistronic tRNA transcripts in Escherichia coli independent of ribonuclease E. Nucleic Acids Research, 2007, 35, 7614-7625.	6.5	50
57	Increased expression of a eukaryotic gene in Escherichia coli through stabilization of its messenger RNA.. Proceedings of the National Academy of Sciences of the United States of America, 1979, 76, 5774-5778.	3.3	48
58	Nucleotide sequence of the thioredoxin gene from Escherichia coli. Bioscience Reports, 1984, 4, 917-923.	1.1	46
59	Enzymes Involved in Posttranscriptional RNA Metabolism in Gram-Negative Bacteria. Microbiology Spectrum, 2018, 6, .	1.2	46
60	Transcript mapping using [35S]DNA probes, trichloroacetate solvent and dideoxy sequencing ladders: a rapid method for identification of transcriptional start points. Gene, 1988, 65, 101-110.	1.0	45
61	Enzymes Involved in the Early Stages of Repair of Ultraviolet-Irradiated DNA. Cold Spring Harbor Symposia on Quantitative Biology, 1968, 33, 229-234.	2.0	43
62	Cloning of the altered mRNA stability (ams) gene of Escherichia coli K-12. Journal of Bacteriology, 1989, 171, 5479-5486.	1.0	42
63	Transcription and translation in E. coli of hybrid plasmids containing the catabolic dehydroquinase gene from Neurospora crassa. Gene, 1978, 4, 241-259.	1.0	41
64	Rho-independent transcription terminators inhibit RNase P processing of the secG leuU and metT tRNA polycistronic transcripts in Escherichia coli. Nucleic Acids Research, 2007, 36, 364-375.	6.5	41
65	Processing of the Escherichia coli leuX tRNA transcript, encoding tRNALeu5, requires either the 3'->5' exoribonuclease polynucleotide phosphorylase or RNase P to remove the Rho-independent transcription terminator. Nucleic Acids Research, 2010, 38, 597-607.	6.5	40
66	Genetic and physical analysis of the thioredoxin (trxA) gene of Escherichia coli K-12. Gene, 1984, 32, 399-408.	1.0	38
67	The umpA gene of Escherichia coli encodes phosphatidylglycerol:prolipoprotein diacylglyceryl transferase (lgt) and regulates thymidylate synthase levels through translational coupling. Journal of Bacteriology, 1995, 177, 1879-1882.	1.0	38
68	Identification of a Second Poly(A) Polymerase in Escherichia coli. Biochemical and Biophysical Research Communications, 1994, 198, 459-465.	1.0	37
69	RNase E levels in Escherichia coli are controlled by a complex regulatory system that involves transcription of the rne gene from three promoters. Molecular Microbiology, 2002, 43, 159-171.	1.2	37
70	Polyadenylation of Escherichia coli transcripts plays an integral role in regulating intracellular levels of polynucleotide phosphorylase and RNase E. Molecular Microbiology, 2002, 45, 1315-1324.	1.2	37
71	<i>De novo</i> computational prediction of non-coding RNA genes in prokaryotic genomes. Bioinformatics, 2009, 25, 2897-2905.	1.8	37
72	Endonucleolytic cleavages by RNase E generate the mature 3â€² termini of the three proline tRNAs in<i>Escherichia coli</i>. Nucleic Acids Research, 2016, 44, 6350-6362.	6.5	35

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73	Identification of endonucleolytic cleavage sites involved in decay of Escherichia coli trxA mRNA. Journal of Bacteriology, 1993, 175, 1043-1052.	1.0	33
74	The <i>Escherichia coli mrsC</i> Gene Is Required for Cell Growth and mRNA Decay. Journal of Bacteriology, 1998, 180, 1920-1928.	1.0	32
75	Residual polyadenylation in poly(A) polymerase I (pcnB) mutants of Escherichia coli does not result from the activity encoded by the f310 gene. Molecular Microbiology, 1999, 34, 1109-1119.	1.2	31
76	Single amino acid changes in the predicted RNase H domain of Escherichia coli RNase G lead to complementation of RNase E deletion mutants. Rna, 2010, 16, 1371-1385.	1.6	31
77	Deregulation of poly(A) polymerase I in Escherichia coli inhibits protein synthesis and leads to cell death. Nucleic Acids Research, 2013, 41, 1757-1766.	6.5	29
78	Physical characterization of the cloned protease III gene from Escherichia coli K-12. Journal of Bacteriology, 1985, 163, 1055-1059.	1.0	29
79	<i>Escherichia coli mrsC</i> Is an Allele of <i>hflB</i> , Encoding a Membrane-Associated ATPase and Protease That Is Required for mRNA Decay. Journal of Bacteriology, 1998, 180, 1929-1938.	1.0	29
80	Processing of the seven valine tRNAs in Escherichia coli involves novel features of RNase P. Nucleic Acids Research, 2014, 42, 11166-11179.	6.5	28
81	Cloning and physical analysis of the pyrF gene (coding for orotidine-5â€²-phosphate decarboxylase) from Escherichia coli K-12. Gene, 1983, 25, 39-48.	1.0	27
82	Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in Escherichia coli K-12. Biochimie, 1990, 72, 835-843.	1.3	27
83	The simple repeat poly(dT-dG).poly(dC-dA) common to eukaryotes is absent from eubacteria and archaebacteria and rare in protozoans.. Molecular Biology and Evolution, 1986, 3, 343-55.	3.5	26
84	In vivo Role of the UV-Endonuclease from Micrococcus luteus in the Repair of DNA. Nature: New Biology, 1971, 234, 47-50.	4.5	25
85	Characterization of DNA helicase II from a uvrD252 mutant of Escherichia coli. Journal of Bacteriology, 1993, 175, 341-350.	1.0	25
86	Cloning the quinic acid (qa) gene cluster from Neurospora crassa: identification of recombinant plasmids containing both qa-2+ and qa-3+. Gene, 1981, 14, 23-32.	1.0	24
87	Role of the heat shock response in stability of mRNA in Escherichia coli K-12. Journal of Bacteriology, 1992, 174, 743-748.	1.0	24
88	Purification and Characterization of Exonuclease V from Escherichia coli K-12. Cold Spring Harbor Symposia on Quantitative Biology, 1984, 49, 463-467.	2.0	24
89	Conditionally lethal ribosomal protein mutants: characterization of a locus required for modification of 50S subunit proteins.. Proceedings of the National Academy of Sciences of the United States of America, 1977, 74, 467-471.	3.3	23
90	Chapter 1 Analysis of RNA Decay, Processing, and Polyadenylation in Escherichia coli and Other Prokaryotes. Methods in Enzymology, 2008, 447, 3-29.	0.4	23

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91	Purification and characterization of orotidine-5'-phosphate decarboxylase from Escherichia coli K-12.. Journal of Bacteriology, 1983, 156, 620-624.	1.0	23
92	Expression of the HIS3 gene of Saccharomyces cerevisiae in polynucleotide phosphorylase-deficient strains of Escherichia coli K-12. Gene, 1980, 12, 1-10.	1.0	22
93	Identification and Characterization of Escherichia coli DNA Helicase II Mutants That Exhibit Increased Unwinding Efficiency. Journal of Bacteriology, 1998, 180, 377-387.	1.0	21
94	Generation of a detailed physical and genetic map of the ilv-metE-udp region of the Escherichia coli chromosome. Journal of Molecular Biology, 1988, 200, 427-438.	2.0	20
95	Isolation of plasmids carrying either the uvrC or uvrC uvrA and ssb genes of Escherichia coli K-12. Gene, 1980, 12, 243-248.	1.0	19
96	Analysis of the regulatory region of the protease iii (ptr) gene of escherichia coli k-12. Gene, 1987, 54, 185-195.	1.0	19
97	Intragenic suppressors of temperature-sensitive <i>rne</i> mutations lead to the dissociation of RNase E activity on mRNA and tRNA substrates in <i>Escherichia coli</i>. Nucleic Acids Research, 2008, 36, 5306-5318.	6.5	19
98	The Response Regulator SprE (RssB) Modulates Polyadenylation and mRNA Stability in<i>Escherichia coli</i>. Journal of Bacteriology, 2009, 191, 6812-6821.	1.0	19
99	Generation of pre-tRNAs from polycistronic operons is the essential function of RNase P in Escherichia coli. Nucleic Acids Research, 2020, 48, 2564-2578.	6.5	19
100	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
101	RNase Eâ€based degradosome modulates polyadenylation of mRNAs after Rhoâ€independent transcription terminators in <i>Escherichia coli</i>. Molecular Microbiology, 2016, 101, 645-655.	1.2	16
102	The cloning and analysis of the aroD gene of E. coli K-12. Gene, 1981, 14, 73-80.	1.0	15
103	New Insights into the Relationship between tRNA Processing and Polyadenylation in Escherichia coli. Trends in Genetics, 2019, 35, 434-445.	2.9	13
104	Inactivation of RNase P in <i>Escherichia coli</i> significantly changes postâ€transcriptional RNA metabolism. Molecular Microbiology, 2022, 117, 121-142.	1.2	12
105	Constitutive expression in Escherichia coli of the Neurospora crassa structural gene encoding the inducible enzyme catabolic dehydroquinase. Molecular Genetics and Genomics, 1979, 172, 93-98.	2.4	11
106	Polyadenylation in <i>E. coli</i>: a 20 year odyssey. Rna, 2015, 21, 673-674.	1.6	11
107	A proposal for a uniform nomenclature for the genetics of bacterial protein synthesis. Molecular Genetics and Genomics, 1976, 147, 145-151.	2.4	10
108	In Vivo Analysis of Polyadenylation in Prokaryotes. Methods in Molecular Biology, 2014, 1125, 229-249.	0.4	8

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109	The rph-1 -Encoded Truncated RNase PH Protein Inhibits RNase P Maturation of Pre-tRNAs with Short Leader Sequences in the Absence of RppH. Journal of Bacteriology, 2017, 199, .	1.0	7
110	Analysis of post-transcriptional RNA metabolism in prokaryotes. Methods, 2019, 155, 124-130.	1.9	6
111	Regulation of mRNA decay in<i>E. coli</i>. Critical Reviews in Biochemistry and Molecular Biology, 2022, 57, 48-72.	2.3	6
112	CLONING: a microcomputer program for cloning simulations. Gene, 1988, 65, 111-116.	1.0	4
113	Isolation of the Enzyme Associated with the sbcA Indirect Suppressor. , 1974, , 137-143.		4
114	The C nucleotide at the mature 5â€² end of the <i>Escherichia coli</i> proline tRNAs is required for the RNase E cleavage specificity at the 3â€² terminus as well as functionality. Nucleic Acids Research, 2022, 50, 1639-1649.	6.5	4
115	Alberta's Construction Labour Relations During the Recent Downturn. Industrial Relations, 1986, 41, 778-801.	0.2	3
116	Instructions for the CLONING program. Gene, 1988, 65, 117-122.	1.0	2
117	Extracellular release of protease III (ptr) by Escherichia coli K12. Canadian Journal of Microbiology, 1991, 37, 718-721.	0.8	2
118	Enzymes Involved in Posttranscriptional RNA Metabolism in Gram-Negative Bacteria. , 2018, , 19-35.		2
119	mRNA Decay and Processing. , 0, , 327-345.		2
120	Messenger RNA Decay. EcoSal Plus, 2007, 2, .	2.1	1
121	Analysis of Temperature-Sensitive recB and recC Mutations. , 1975, 5A, 301-306.		1
122	Pre-tRNA and Pre-rRNA Processing in Bacteria. , 2004, , 420-424.		1
123	Maturation of the <i>E. coli</i> Glu2, Ile1 and <scp>Ala1B tRNAs</scp> utilizes a complex processing pathway. Molecular Microbiology, 0, , .	1.2	1
124	Transcription of ribosomal protein genes carried on Fâ€² plasmids ofEscherichia coli. Molecular Genetics and Genomics, 1977, 150, 183-191.	2.4	0
125	Reliability Of Unsupported Upper Limb Exercise Test Performance For Patients With Multiple Sclerosis. Medicine and Science in Sports and Exercise, 2005, 37, S225-S226.	0.2	0