Sidney R Kushner

List of Publications by Citations

124 papers	9,381 citations	50 h-index	96 g-index
129 ext. papers	9,868 ext. citations	7.5 avg, IF	5.97 L-index

#	Paper	IF	Citations
124	Construction of versatile low-copy-number vectors for cloning, sequencing and gene expression in Escherichia coli. *Gene*, **1991**, 100, 195-199	3.8	1010
123	New method for generating deletions and gene replacements in Escherichia coli. *Journal of Bacteriology*, **1989**, 171, 4617-22	3.5	646
122	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, 120-4	11.5	393
121	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, 824-7	11.5	312
120	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, 5259-63	11.5	289
119	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	11.5	267
118	Escherichia coli peptide methionine sulfoxide reductase gene: regulation of expression and role in protecting against oxidative damage. *Journal of Bacteriology*, **1995**, 177, 502-7	3.5	254
117	Polynucleotide phosphorylase functions both as a 3Sright-arrow 5Sexonuclease and a poly(A) polymerase in Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 11966-71	11.5	226
116	Polyadenylylation helps regulate mRNA decay in Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 1807-11	11.5	224
115	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, 2605-17	12.6	218
114	RNA methylation under heat shock control. *Molecular Cell*, **2000**, 6, 349-60	17.6	211
113	Stabilization of discrete mRNA breakdown products in ams pnp rnb multiple mutants of Escherichia coli K-12. *Journal of Bacteriology*, **1988**, 170, 4625-33	3.5	211
112	mRNA decay in Escherichia coli comes of age. *Journal of Bacteriology*, **2002**, 184, 4658-65; discussion 4657	3.5	198
111	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, 4925-9	11.5	191
110	The Sm-like protein Hfq regulates polyadenylation dependent mRNA decay in Escherichia coli. *Molecular Microbiology*, **2004**, 54, 905-20	4.1	175
109	Initiation of tRNA maturation by RNase E is essential for cell viability in E. coli. *Genes and Development*, **2002**, 16, 1102-15	12.6	163
108	Enzymatic repair of DNA. 3. Properties of the UV-endonuclease and UV-exonuclease. *Biochemistry*, **1971**, 10, 3315-24	3.2	144

107	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, 1366-70	11.5	127
106	Analysis of the function of Escherichia coli poly(A) polymerase I in RNA metabolism. *Molecular Microbiology*, **1999**, 34, 1094-108	4.1	119
105	Analysis of mRNA decay and rRNA processing in Escherichia coli in the absence of RNase E-based degradosome assembly. *Molecular Microbiology*, **2000**, 38, 854-66	4.1	118
104	Identification, cloning, and expression of bolA, an ftsZ-dependent morphogene of Escherichia coli. *Journal of Bacteriology*, **1988**, 170, 5169-76	3.5	113
103	Recombinant levels of Escherichia coli K-12 mutants deficient in various replication, recombination, or repair genes. *Journal of Bacteriology*, **1978**, 134, 958-66	3.5	112
102	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, 5086-90	11.5	109
101	Analysis of mRNA decay and rRNA processing in Escherichia coli multiple mutants carrying a deletion in RNase III. *Journal of Bacteriology*, **1993**, 175, 229-39	3.5	106
100	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, 3508-12	11.5	103
99	Analysis of Escherichia coli RNase E and RNase III activity in vivo using tiling microarrays. *Nucleic Acids Research*, **2011**, 39, 3188-203	20.1	99
98	Genomic analysis in Escherichia coli demonstrates differential roles for polynucleotide phosphorylase and RNase II in mRNA abundance and decay. *Molecular Microbiology*, **2003**, 50, 645-58	4.1	96
97	Isolation of exonuclease VIII: the enzyme associated with sbcA indirect suppressor. *Proceedings of the National Academy of Sciences of the United States of America*, **1974**, 71, 3593-7	11.5	95
96	Enzymatic repair of DNA, 1. 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, 144-51	11.5	95
95	RNAsnap□a rapid, quantitative and inexpensive, method for isolating total RNA from bacteria. *Nucleic Acids Research*, **2012**, 40, e156	20.1	94
94	The majority of Escherichia coli mRNAs undergo post-transcriptional modification in exponentially growing cells. *Nucleic Acids Research*, **2006**, 34, 5695-704	20.1	87
93	mRNA decay in prokaryotes and eukaryotes: different approaches to a similar problem. *IUBMB Life*, **2004**, 56, 585-94	4.7	85
92	In vivo studies of temperature-sensitive recB and recC mutants. *Journal of Bacteriology*, **1974**, 120, 1213-35	3.5	84
91	GENETIC ANALYSIS OF MUTATIONS INDIRECTLY SUPPRESSING recB AND recC MUTATIONS. *Genetics*, **1972**, 72, 205-215	4	83
90	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, 5616-20	11.5	82

89	Polynucleotide phosphorylase, RNase II and RNase E play different roles in the in vivo modulation of polyadenylation in Escherichia coli. *Molecular Microbiology*, **2000**, 36, 982-94	4.1	79
88	Regulation of mRNA Decay in Bacteria. *Annual Review of Microbiology*, **2016**, 70, 25-44	17.5	76
87	Chloroplast ribosomal RNA genes in Euglena gracilis exist as three clustered tandem repeats. *Gene*, **1978**, 3, 191-209	3.8	74
86	RNase Z in Escherichia coli plays a significant role in mRNA decay. *Molecular Microbiology*, **2006**, 60, 723-37	4.1	69
85	The role of the SgearboxSin the transcription of essential genes. *Molecular Microbiology*, **1991**, 5, 2085-91	4.1	68
84	Construction and analysis of deletions in the structural gene (uvrD) for DNA helicase II of Escherichia coli. *Journal of Bacteriology*, **1991**, 173, 2569-75	3.5	67
83	Bacterial/archaeal/organellar polyadenylation. *Wiley Interdisciplinary Reviews RNA*, **2011**, 2, 256-76	9.3	65
82	Enzymatic repair of deoxyribonucleic acid. IV. Mechanism of photoproduct excision. *Biochemistry*, **1971**, 10, 3325-34	3.2	65
81	Physical and biochemical analysis of the cloned recB and recC genes of Escherichia coli K-12. *Journal of Bacteriology*, **1984**, 157, 21-7	3.5	63
80	Analysis of genetic recombination between two partially deleted lactose operons of Escherichia coli K-12. *Journal of Bacteriology*, **1977**, 131, 123-32	3.5	61
79	RNase G of Escherichia coli exhibits only limited functional overlap with its essential homologue, RNase E. *Molecular Microbiology*, **2003**, 49, 607-22	4.1	55
78	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, 5783-7	11.5	54
77	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, 12926-31	11.5	53
76	Physical and biochemical characterization of cloned sbcB and xonA mutations from Escherichia coli K-12. *Journal of Bacteriology*, **1988**, 170, 2089-94	3.5	52
75	Amplification of ribonuclease II (rnb) activity in Escherichia coli K-12. *Nucleic Acids Research*, **1983**, 11, 265-75	20.1	52
74	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, 3492-6	11.5	48
73	Polyadenylation helps regulate functional tRNA levels in Escherichia coli. *Nucleic Acids Research*, **2012**, 40, 4589-603	20.1	45
72	Transcript mapping using [35S]DNA probes, trichloroacetate solvent and dideoxy sequencing ladders: a rapid method for identification of transcriptional start points. *Gene*, **1988**, 65, 101-10	3.8	43

71	Transcription of the uvrD gene of Escherichia coli is controlled by the lexA repressor and by attenuation. *Nucleic Acids Research*, **1983**, 11, 8625-40	20.1	43
70	Exonucleases I, III, and V are required for stability of ColE1-related plasmids in Escherichia coli. *Journal of Bacteriology*, **1984**, 157, 661-4	3.5	43
69	Nucleotide sequence of the thioredoxin gene from Escherichia coli. *Bioscience Reports*, **1984**, 4, 917-23	4.1	42
68	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, 5774-8	11.5	42
67	Ribonuclease P processes polycistronic tRNA transcripts in Escherichia coli independent of ribonuclease E. *Nucleic Acids Research*, **2007**, 35, 7614-25	20.1	40
66	Differential thermolability of exonuclease and endonuclease activities of the recBC nuclease isolated from thermosensitive recB and recC mutants. *Journal of Bacteriology*, **1974**, 120, 1219-22	3.5	40
65	Cloning of the altered mRNA stability (ams) gene of Escherichia coli K-12. *Journal of Bacteriology*, **1989**, 171, 5479-86	3.5	39
64	Rho-independent transcription terminators inhibit RNase P processing of the secG leuU and metT tRNA polycistronic transcripts in Escherichia coli. *Nucleic Acids Research*, **2008**, 36, 364-75	20.1	37
63	De novo computational prediction of non-coding RNA genes in prokaryotic genomes. *Bioinformatics* , **2009**, 25, 2897-905	7.2	36
62	Polyadenylation of Escherichia coli transcripts plays an integral role in regulating intracellular levels of polynucleotide phosphorylase and RNase E. *Molecular Microbiology*, **2002**, 45, 1315-24	4.1	36
61	Genetic and physical analysis of the thioredoxin (trxA) gene of Escherichia coli K-12. *Gene*, **1984**, 32, 399-408	3.8	36
60	Processing of the Escherichia coli leuX tRNA transcript, encoding tRNA(Leu5), requires either the 3S->5Sexoribonuclease polynucleotide phosphorylase or RNase P to remove the Rho-independent transcription terminator. *Nucleic Acids Research*, **2010**, 38, 597-607	20.1	35
59	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, 159-71	4.1	35
58	Identification of a second poly(A) polymerase in Escherichia coli. *Biochemical and Biophysical Research Communications*, **1994**, 198, 459-65	3.4	35
57	Transcription and translation in E. coli of hybrid plasmids containing the catabolic dehydroquinase gene from Neurospora crassa. *Gene*, **1978**, 4, 241-59	3.8	34
56	Enzymes involved in the early stages of repair of ultraviolet-irradiated DNA. *Cold Spring Harbor Symposia on Quantitative Biology*, **1968**, 33, 229-34	3.9	34
55	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, 1109-19	4.1	31
54	Identification of endonucleolytic cleavage sites involved in decay of Escherichia coli trxA mRNA. *Journal of Bacteriology*, **1993**, 175, 1043-52	3.5	31

53	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, 1371-85	5.8	30
52	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, 1879-82	3.5	29
51	Enzymes Involved in Posttranscriptional RNA Metabolism in Gram-Negative Bacteria. *Microbiology Spectrum*, **2018**, 6,	8.9	28
50	Deregulation of poly(A) polymerase I in Escherichia coli inhibits protein synthesis and leads to cell death. *Nucleic Acids Research*, **2013**, 41, 1757-66	20.1	27
49	The Escherichia coli mrsC gene is required for cell growth and mRNA decay. *Journal of Bacteriology*, **1998**, 180, 1920-8	3.5	27
48	Cloning and physical analysis of the pyrF gene (coding for orotidine-5Sphosphate decarboxylase) from Escherichia coli K-12. *Gene*, **1983**, 25, 39-48	3.8	25
47	Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in Escherichia coli K-12. *Biochimie*, **1990**, 72, 835-43	4.6	24
46	Physical characterization of the cloned protease III gene from Escherichia coli K-12. *Journal of Bacteriology*, **1985**, 163, 1055-9	3.5	24
45	Escherichia coli mrsC is an allele of hflB, encoding a membrane-associated ATPase and protease that is required for mRNA decay. *Journal of Bacteriology*, **1998**, 180, 1929-38	3.5	24
44	Purification and characterization of exonuclease V from Escherichia coli K-12. *Cold Spring Harbor Symposia on Quantitative Biology*, **1984**, 49, 463-7	3.9	23
43	Role of the heat shock response in stability of mRNA in Escherichia coli K-12. *Journal of Bacteriology* , **1992**, 174, 743-8	3.5	22
42	Analysis of RNA decay, processing, and polyadenylation in Escherichia coli and other prokaryotes. *Methods in Enzymology*, **2008**, 447, 3-29	1.7	21
41	Characterization of DNA helicase II from a uvrD252 mutant of Escherichia coli. *Journal of Bacteriology*, **1993**, 175, 341-50	3.5	21
40	Cloning the quinic acid (aq) gene cluster from Neurospora crassa: identification of recombinant plasmids containing both qa-2+ and qa-3+. *Gene*, **1981**, 14, 23-32	3.8	21
39	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	8.3	20
38	Purification and characterization of orotidine-5Sphosphate decarboxylase from Escherichia coli K-12. *Journal of Bacteriology*, **1983**, 156, 620-4	3.5	20
37	Intragenic suppressors of temperature-sensitive rne mutations lead to the dissociation of RNase E activity on mRNA and tRNA substrates in Escherichia coli. *Nucleic Acids Research*, **2008**, 36, 5306-18	20.1	19
36	Identification and characterization of Escherichia coli DNA helicase II mutants that exhibit increased unwinding efficiency. *Journal of Bacteriology*, **1998**, 180, 377-87	3.5	19

35	In vivo role of the UV-endonuclease from Micrococcus luteus in the repair of DNA. *Nature: New Biology*, **1971**, 234, 47-50		18
34	Analysis of the in vivo decay of the Escherichia coli dicistronic pyrF-orfF transcript: evidence for multiple degradation pathways. *Journal of Molecular Biology*, **1997**, 268, 261-72	6.5	17
33	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, 427-38	6.5	17
32	Isolation of plasmids carrying either the uvrC or uvrC uvrA and ssb genes of Escherichia coli K-12. *Gene*, **1980**, 12, 243-8	3.8	17
31	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, 467-71	11.5	17
30	Endonucleolytic cleavages by RNase E generate the mature 3Stermini of the three proline tRNAs in Escherichia coli. *Nucleic Acids Research*, **2016**, 44, 6350-62	20.1	16
29	Processing of the seven valine tRNAs in Escherichia coli involves novel features of RNase P. *Nucleic Acids Research*, **2014**, 42, 11166-79	20.1	15
28	The response regulator SprE (RssB) modulates polyadenylation and mRNA stability in Escherichia coli. *Journal of Bacteriology*, **2009**, 191, 6812-21	3.5	15
27	Analysis of the regulatory region of the protease III (ptr) gene of Escherichia coli K-12. *Gene*, **1987**, 54, 185-95	3.8	15
26	The cloning and analysis of the aroD gene of E. coli K-12. *Gene*, **1981**, 14, 73-80	3.8	13
25	RNase E-based degradosome modulates polyadenylation of mRNAs after Rho-independent transcription terminators in Escherichia coli. *Molecular Microbiology*, **2016**, 101, 645-55	4.1	13
24	Expression of the HIS3 gene of Saccharomyces cerevisiae in polynucleotide phosphorylase-deficient strains of Escherichia coli K-12. *Gene*, **1980**, 12, 1-10	3.8	12
23	Generation of pre-tRNAs from polycistronic operons is the essential function of RNase P in Escherichia coli. *Nucleic Acids Research*, **2020**, 48, 2564-2578	20.1	8
22	Constitutive expression in Escherichia coli of the Neurospora crassa structural gene encoding the inducible enzyme catabolic dehydroquinase. *Molecular Genetics and Genomics*, **1979**, 172, 93-8		8
21	A proposal for a uniform nomenclature for the genetics of bacterial protein synthesis. *Molecular Genetics and Genomics*, **1976**, 147, 145-51		8
20	The -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,	3.5	6
19	New Insights into the Relationship between tRNA Processing and Polyadenylation in Escherichia coli. *Trends in Genetics*, **2019**, 35, 434-445	8.5	6
18	Polyadenylation in E. coli: a 20 year odyssey. *Rna*, **2015**, 21, 673-4	5.8	6

17	In vivo analysis of polyadenylation in prokaryotes. *Methods in Molecular Biology*, **2014**, 1125, 229-49	1.4	6
16	CLONING: a microcomputer program for cloning simulations. *Gene*, **1988**, 65, 111-6	3.8	4
15	Isolation of the Enzyme Associated with the sbcA Indirect Suppressor **1974**, 137-143		4
14	Analysis of post-transcriptional RNA metabolism in prokaryotes. *Methods*, **2019**, 155, 124-130	4.6	3
13	Extracellular release of protease III (ptr) by Escherichia coli K12. *Canadian Journal of Microbiology*, **1991**, 37, 718-21	3.2	2
12	Instructions for the CLONING program. *Gene*, **1988**, 65, 117-22	3.8	2
11	Alberta's Construction Labour Relations During the Recent Downturn. *Industrial Relations*, **1986**, 41, 778-801	3.4	2
10	mRNA Decay and Processing327-345		2
9	Enzymes Involved in Posttranscriptional RNA Metabolism in Gram-Negative Bacteria **2018**, 19-35		2
8	Inactivation of RNase P in Escherichia coli significantly changes post-transcriptional RNA metabolism. *Molecular Microbiology*, **2021**,	4.1	2
7	Messenger RNA Decay. *EcoSal Plus*, **2007**, 2,	7.7	1
6	Pre-tRNA and Pre-rRNA Processing in Bacteria **2004**, 420-424		1
5	Regulation of mRNA decay in. *Critical Reviews in Biochemistry and Molecular Biology*, **2021**, 1-25	8.7	1
4	Analysis of temperature-sensitive recB and recC mutations. *Basic Life Sciences*, **1975**, 5A, 301-6		1
3	Transcription of ribosomal protein genes carried on FSplasmids of Escherichia coli. *Molecular Genetics and Genomics*, **1977**, 150, 183-91		
2	Reliability Of Unsupported Upper Limb Exercise Test Performance For Patients With Multiple Sclerosis. *Medicine and Science in Sports and Exercise*, **2005**, 37, S225-S226	1.2	
1	Messenger RNA in Prokaryotes1-11		