Susan M Rosenberg

List of Publications by Year
in descending order

118 papers	9,134 citations	38742 50 h-index	45317 90 g-index
129 all docs	129 docs citations	129 times ranked	7357 citing authors

#	Article	IF	Citations
1	Mechanisms of change in gene copy number. Nature Reviews Genetics, 2009, 10, 551-564.	16.3	1,066
2	Mutation as a Stress Response and the Regulation of Evolvability. Critical Reviews in Biochemistry and Molecular Biology, 2007, 42, 399-435.	5.2	545
3	Evolving responsively: adaptive mutation. Nature Reviews Genetics, 2001, 2, 504-515.	16.3	368
4	Recombination in Adaptive Mutation. Science, 1994, 264, 258-260.	12.6	284
5	SOS Mutator DNA Polymerase IV Functions in Adaptive Mutation and Not Adaptive Amplification. Molecular Cell, 2001, 7, 571-579.	9.7	270
6	Genome-wide hypermutation in a subpopulation of stationary-phase cells underlies recombination-dependent adaptive mutation. EMBO Journal, 1997, 16, 3303-3311.	7.8	267
7	The SOS response regulates adaptive mutation. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 6646-6651.	7.1	252
8	Adaptive Mutation by Deletions in Small Mononucleotide Repeats. Science, 1994, 265, 405-407.	12.6	236
9	A Switch from High-Fidelity to Error-Prone DNA Double-Strand Break Repair Underlies Stress-Induced Mutation. Molecular Cell, 2005, 19, 791-804.	9.7	234
10	Identity and Function of a Large Gene Network Underlying Mutagenic Repair of DNA Breaks. Science, 2012, 338, 1344-1348.	12.6	195
11	Spontaneous DNA breakage in single living Escherichia coli cells. Nature Genetics, 2007, 39, 797-802.	21.4	182
12	Emergence of antibiotic resistance from multinucleated bacterial filaments. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 178-183.	7.1	179
13	Measurement of SOS expression in individual Escherichia coli K-12 cells using fluorescence microscopy. Molecular Microbiology, 2004, 53, 1343-1357.	2.5	164
14	Mismatch repair protein MutL becomes limiting during stationary-phaseâ€‰mutation. Genes and Development, 1997, 11, 2426-2437.	5.9	153
15	On the Mechanism of Gene Amplification Induced under Stress in Escherichia coli. PLoS Genetics, 2006, 2, e48.	3.5	147
16	Opposing Roles of the Holliday Junction Processing Systems of <i>Escherichia coli</i> in Recombination-Dependent Adaptive Mutation. Genetics, 1996, 142, 681-691.	2.9	147
17	Adaptive Amplification. Cell, 2000, 103, 723-731.	28.9	141
18	Antibiotic-induced lateral transfer of antibiotic resistance. Trends in Microbiology, 2004, 12, 401-404.	7.7	139

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19	General Stress Response Regulator RpoS in Adaptive Mutation and Amplification in<i>Escherichia coli</i>. Genetics, 2004, 166, 669-680.	2.9	129
20	Stress-Induced Mutagenesis: Implications in Cancer and Drug Resistance. Annual Review of Cancer Biology, 2017, 1, 119-140.	4.5	129
21	R-loops and nicks initiate DNA breakage and genome instability in non-growing Escherichia coli. Nature Communications, 2013, 4, 2115.	12.8	127
22	Gamblers: An Antibiotic-Induced Evolvable Cell Subpopulation Differentiated by Reactive-Oxygen-Induced General Stress Response. Molecular Cell, 2019, 74, 785-800.e7.	9.7	126
23	Impact of a stress-inducible switch to mutagenic repair of DNA breaks on mutation in <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13659-13664.	7.1	115
24	Recombination of bacteriophage Î» in <i>recD</i> mutants of <i>Escherichia coli</i>. Genome, 1989, 31, 53-67.	2.0	112
25	Transient and Heritable Mutators in Adaptive Evolution in the Lab and in Nature. Genetics, 1998, 148, 1559-1566.	2.9	112
26	Stressâ€induced mutation via DNA breaks in <i>Escherichia coli</i>: A molecular mechanism with implications for evolution and medicine. BioEssays, 2012, 34, 885-892.	2.5	110
27	Adaptive mutation and amplification in Escherichia coli: two pathways of genome adaptation under stress. Research in Microbiology, 2004, 155, 352-359.	2.1	107
28	Stationary-phase mutation in the bacterial chromosome: Recombination protein and DNA polymerase IV dependence. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 8334-8341.	7.1	105
29	Engineered proteins detect spontaneous DNA breakage in human and bacterial cells. ELife, 2013, 2, e01222.	6.0	105
30	DinB Upregulation Is the Sole Role of the SOS Response in Stress-Induced Mutagenesis in<i>Escherichia coli</i>. Genetics, 2009, 182, 55-68.	2.9	102
31	Molecular handles on adaptive mutation. Molecular Microbiology, 1995, 18, 185-189.	2.5	95
32	The split-end model for homologous recombination at double-strand breaks and at Chi. Biochimie, 1991, 73, 385-397.	2.6	90
33	Improved in vitro packaging of coliphage lambda DNA: a one-strain system free from endogenous phage. Gene, 1985, 38, 165-175.	2.2	89
34	Stress-Induced Î²-Lactam Antibiotic Resistance Mutation and Sequences of Stationary-Phase Mutations in the <i>Escherichia coli</i> Chromosome. Journal of Bacteriology, 2009, 191, 5881-5889.	2.2	85
35	Adaptive mutations, mutator DNA polymerases and genetic change strategies of pathogens. Current Opinion in Microbiology, 2001, 4, 586-594.	5.1	79
36	Double-strand-break repair recombination in Escherichia coli: physical evidence for a DNA replication mechanism in vivo. Genes and Development, 1999, 13, 2889-2903.	5.9	76

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37	Adaptive mutation sequences reproduced by mismatch repair deficiency.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 12017-12020.	7.1	75
38	Adaptive Amplification and Point Mutation Are Independent Mechanisms: Evidence for Various Stress-Inducible Mutation Mechanisms. PLoS Biology, 2004, 2, e399.	5.6	74
39	Evidence for Both 3â€™ and 5â€™ Single-Strand DNA Ends in Intermediates in Chi-Stimulated Recombination <i>In Vivo</i>. Genetics, 1996, 142, 333-339.	2.9	71
40	Mutation for survival. Current Opinion in Genetics and Development, 1997, 7, 829-834.	3.3	70
41	The dinB Operon and Spontaneous Mutation in Escherichia coli. Journal of Bacteriology, 2003, 185, 3972-3977.	2.2	69
42	Bacteria-to-Human Protein Networks Reveal Origins of Endogenous DNA Damage. Cell, 2019, 176, 127-143.e24.	28.9	69
43	Two Mechanisms Produce Mutation Hotspots at DNA Breaks in Escherichia coli. Cell Reports, 2012, 2, 714-721.	6.4	67
44	The Ïƒ^E stress response is required for stressâ€induced mutation and amplification in <i>Escherichia coli</i>. Molecular Microbiology, 2010, 77, 415-430.	2.5	63
45	Evidence That Stationary-Phase Hypermutation in the Escherichia coli Chromosome Is Promoted by Recombination. Genetics, 2000, 154, 1427-1437.	2.9	61
46	The transcription fidelity factor GreA impedes DNA break repair. Nature, 2017, 550, 214-218.	27.8	60
47	Role of RecA and the SOS Response in Thymineless Death in Escherichia coli. PLoS Genetics, 2010, 6, e1000865.	3.5	57
48	A role for topoisomerase III in a recombination pathway alternative to RuvABC. Molecular Microbiology, 2005, 58, 80-101.	2.5	55
49	Mutability and Importance of a Hypermutable Cell Subpopulation that Produces Stress-Induced Mutants in Escherichia coli. PLoS Genetics, 2008, 4, e1000208.	3.5	53
50	An SOS-Regulated Type 2 Toxin-Antitoxin System. Journal of Bacteriology, 2009, 191, 7456-7465.	2.2	53
51	Combating Evolution to Fight Disease. Science, 2014, 343, 1088-1089.	12.6	53
52	A direct role for DNA polymerase III in adaptive reversion of a frameshift mutation in Escherichia coli. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1997, 375, 19-24.	1.0	51
53	RecQ Promotes Toxic Recombination in Cells Lacking Recombination Intermediate-Removal Proteins. Molecular Cell, 2007, 26, 273-286.	9.7	51
54	Separate DNA Pol II- and Pol IV-Dependent Pathways of Stress-Induced Mutation during Double-Strand-Break Repair in <i>Escherichia coli</i> Are Controlled by RpoS. Journal of Bacteriology, 2010, 192, 4694-4700.	2.2	50

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55	General Stress Response Regulator RpoS in Adaptive Mutation and Amplification in <i>Escherichia coli</i>. Genetics, 2004, 166, 669-680.	2.9	49
56	In pursuit of a molecular mechanism for adaptive mutation. Genome, 1994, 37, 893-899.	2.0	48
57	Guidelines for DNA recombination and repair studies: Cellular assays of DNA repair pathways. Microbial Cell, 2019, 6, 1-64.	3.2	47
58	What is mutation? A chapter in the series: How microbes â€œjeopardizeâ€•the modern synthesis. PLoS Genetics, 2019, 15, e1007995.	3.5	46
59	Chi-stimulated patches are heteroduplex, with recombinant information on the phage Î» r chain. Cell, 1987, 48, 855-865.	28.9	45
60	Competition of Escherichia coli DNA Polymerases I, II and III with DNA Pol IV in Stressed Cells. PLoS ONE, 2010, 5, e10862.	2.5	45
61	Adaptive Point Mutation and Adaptive Amplification Pathways in the Escherichia coli Lac System: Stress Responses Producing Genetic Change. Journal of Bacteriology, 2004, 186, 4838-4843.	2.2	42
62	Recombination-dependent mutation in non-dividing cells. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1996, 350, 69-76.	1.0	39
63	MICROBIOLOGY AND EVOLUTION: Modulating Mutation Rates in the Wild. Science, 2003, 300, 1382-1383.	12.6	39
64	Holliday junction trap shows how cells use recombination and a junction-guardian role of RecQ helicase. Science Advances, 2016, 2, e1601605.	10.3	39
65	Roles of E. coli double-strand-break-repair proteins in stress-induced mutation. DNA Repair, 2006, 5, 258-273.	2.8	37
66	Recombination-Dependent Mutation in Escherichia coli Occurs in Stationary Phase. Genetics, 1998, 149, 1163-1165.	2.9	37
67	The DNA polymerase III holoenzyme contains Î³ and is not a trimeric polymerase. Nucleic Acids Research, 2016, 44, 1285-1297.	14.5	34
68	Transcriptomeâ€wide association study reveals candidate causal genes for lung cancer. International Journal of Cancer, 2020, 146, 1862-1878.	5.1	33
69	Mismatch Repair in Escherichia coli Cells Lacking Single-Strand Exonucleases ExoI, ExoVII, and RecJ. Journal of Bacteriology, 1998, 180, 989-993.	2.2	33
70	Persistent damaged bases in DNA allow mutagenic break repair in Escherichia coli. PLoS Genetics, 2017, 13, e1006733.	3.5	25
71	The TGV transgenic vectors for single-copy gene expression from the Escherichia coli chromosome. Gene, 2001, 273, 97-104.	2.2	23
72	EcoK restriction during in vitro packaging of coliphage lambda DNA. Gene, 1985, 39, 313-315.	2.2	22

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73	Pathways of Resistance to Thymineless Death in Escherichia coli and the Function of UvrD. Genetics, 2011, 189, 23-36.	2.9	22
74	radC102 of Escherichia coliIs an Allele of recG. Journal of Bacteriology, 2000, 182, 6287-6291.	2.2	21
75	Chromosomal System for Studying AmpC-Mediated Î²-Lactam Resistance Mutation in Escherichia coli. Antimicrobial Agents and Chemotherapy, 2002, 46, 1535-1539.	3.2	21
76	Expression ofNkx2-5-GFP bacterial artificial chromosome transgenic mice closely resembles endogenousNkx2-5 gene activity. Genesis, 2003, 35, 220-226.	1.6	20
77	Stress-Induced Loss of Heterozygosity in <i>Candida</i> : a Possible Missing Link in the Ability to Evolve. MBio, 2011, 2, .	4.1	20
78	Poorly Repaired Mismatches in Heteroduplex DNA are Hyper-Recombinagenic in Saccharomyces cerevisiae. Genetics, 1996, 142, 407-416.	2.9	20
79	Rare deleterious germline variants and risk of lung cancer. Npj Precision Oncology, 2021, 5, 12.	5.4	19
80	In pursuit of a molecular mechanism for adaptive gene amplification. DNA Repair, 2002, 1, 111-123.	2.8	18
81	RecQ-dependent death-by-recombination in cells lacking RecG and UvrD. DNA Repair, 2010, 9, 403-413.	2.8	18
82	Stress-Induced Mutagenesis, Gambler Cells, and Stealth Targeting Antibiotic-Induced Evolution. MBio, 2022, 13, .	4.1	18
83	[7] Improved in vitro packaging of Î» DNA. Methods in Enzymology, 1987, 153, 95-103.	1.0	17
84	Mechanisms of Genome-Wide Hypermutation in Stationary Phasea. Annals of the New York Academy of Sciences, 1999, 870, 275-289.	3.8	17
85	Life, Death, Differentiation, and the Multicellularity of Bacteria. PLoS Genetics, 2009, 5, e1000418.	3.5	16
86	Worming into genetic instability. Nature, 2004, 430, 625-626.	27.8	15
87	What Limits the Efficiency of Double-Strand Break-Dependent Stress-Induced Mutation in Escherichia coli. Journal of Molecular Microbiology and Biotechnology, 2011, 21, 8-19.	1.0	15
88	Roles of Nucleoid-Associated Proteins in Stress-Induced Mutagenic Break Repair in Starving <i>Escherichia coli</i>. Genetics, 2015, 201, 1349-1362.	2.9	15
89	Two mechanisms of chromosome fragility at replication-termination sites in bacteria. Science Advances, 2021, 7, .	10.3	15
90	The Small RNA GcvB Promotes Mutagenic Break Repair by Opposing the Membrane Stress Response. Journal of Bacteriology, 2016, 198, 3296-3308.	2.2	14

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91	An ultra-dense library resource for rapid deconvolution of mutations that cause phenotypes in<i>Escherichia coli</i>. Nucleic Acids Research, 2016, 44, e41-e41.	14.5	14
92	Evolutionary action of mutations reveals antimicrobial resistance genes in Escherichia coli. Nature Communications, 2022, 13, .	12.8	11
93	Hypermutation in stationary-phaseE. coli: tales from thelac operon. Journal of Genetics, 1999, 78, 13-20.	0.7	10
94	Atypical Role for PhoU in Mutagenic Break Repair under Stress in Escherichia coli. PLoS ONE, 2015, 10, e0123315.	2.5	10
95	Response to John Cairns: The Contribution of Transiently Hypermutable Cells to Mutation in Stationary Phase. Genetics, 2000, 156, 925-926.	2.9	10
96	Rebuttal: Growth under Selection Stimulates Lac+ Reversion (Roth and Andersson). Journal of Bacteriology, 2004, 186, 4862-4863.	2.2	8
97	Single-Strand-Specific Exonucleases Prevent Frameshift Mutagenesis by Suppressing SOS Induction and the Action of DinB/DNA Polymerase IV in Growing Cells. Journal of Bacteriology, 2006, 188, 2336-2342.	2.2	8
98	Antibiotic Resistance, Not Shaken or Stirred. Science, 2011, 333, 1713-1714.	12.6	8
99	xni-deficient Escherichia coli are proficient for recombination and multiple pathways of repair. DNA Repair, 2003, 2, 1175-1183.	2.8	7
100	Oxygen and RNA in stress-induced mutation. Current Genetics, 2018, 64, 769-776.	1.7	7
101	Tools To Live By: Bacterial DNA Structures Illuminate Cancer. Trends in Genetics, 2019, 35, 383-395.	6.7	7
102	Rebuttal: Adaptive Mutation in Escherichia coli (Foster). Journal of Bacteriology, 2004, 186, 4853-4853.	2.2	6
103	Extreme Genome Repair. Cell, 2009, 136, 998-1000.	28.9	6
104	Evolutionary dynamics and information hierarchies in biological systems. Annals of the New York Academy of Sciences, 2013, 1305, 1-17.	3.8	6
105	Fluorescent fusions of the N protein of phage Mu label DNA damage in living cells. DNA Repair, 2018, 72, 86-92.	2.8	5
106	Physical Analyses of E. coli Heteroduplex Recombination Products In Vivo: On the Prevalence of 5â€² and 3â€² Patches. PLoS ONE, 2007, 2, e1242.	2.5	4
107	Genomic rearrangement in three dimensions. Nature Biotechnology, 2011, 29, 1096-1098.	17.5	4
108	Gross chromosomal rearrangement mediated by DNA replication in stressed cells: evidence from <i>Escherichia coli</i>. Annals of the New York Academy of Sciences, 2012, 1267, 103-109.	3.8	4

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109	Thymineless death is inhibited by CsrA in Escherichia coli lacking the SOS response. DNA Repair, 2013, 12, 993-999.	2.8	4
110	A radical way to die. Nature Microbiology, 2017, 2, 1582-1583.	13.3	4
111	Biology before the SOS Responseâ€"DNA Damage Mechanisms at Chromosome Fragile Sites. Cells, 2021, 10, 2275.	4.1	4
112	Driving cancer evolution. ELife, 2017, 6, .	6.0	4
113	Spontaneous Mutation: Real-Time inÂLiving Cells. Current Biology, 2010, 20, R810-R811.	3.9	3
114	Mutagenesis Associated with Repair of DNA Double-Strand Breaks Under Stress. , 2013, , 21-39.		2
115	An Age-Old Problem. PLoS Genetics, 2007, 3, e37.	3.5	1
116	Gene Conversion. , 1998, , 969-973.		0
117	DNA Replication Arrest at Protein and Transcription Barriers is Governed by DNA Supercoiling. SSRN Electronic Journal, 0, , .	0.4	0
118	Genomic mapping of DNA-repair reaction intermediates in living cells with engineered DNA structure-trap proteins. Methods in Enzymology, 2021, 661, 155-181.	1.0	0