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	Stress-Induced Mutagenesis, Gambler Cells, and Stealth Targeting Antibiotic-Induced Evolution. MBio, 2022, 13, .	4.1	18
2	Evolutionary action of mutations reveals antimicrobial resistance genes in Escherichia coli. Nature Communications, 2022, 13, .	12.8	11
3	Rare deleterious germline variants and risk of lung cancer. Npj Precision Oncology, 2021, 5, 12.	5.4	19
4	Two mechanisms of chromosome fragility at replication-termination sites in bacteria. Science Advances, 2021, 7, .	10.3	15
5	Biology before the SOS Responseâ€"DNA Damage Mechanisms at Chromosome Fragile Sites. Cells, 2021, 10, 2275.	4.1	4
6	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
7	Transcriptomeâ€wide association study reveals candidate causal genes for lung cancer. International Journal of Cancer, 2020, 146, 1862-1878.	5.1	33
8	Guidelines for DNA recombination and repair studies: Cellular assays of DNA repair pathways. Microbial Cell, 2019, 6, 1-64.	3.2	47
9	What is mutation? A chapter in the series: How microbes â€œjeopardizeâ€•the modern synthesis. PLoS Genetics, 2019, 15, e1007995.	3.5	46
10	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
11	Tools To Live By: Bacterial DNA Structures Illuminate Cancer. Trends in Genetics, 2019, 35, 383-395.	6.7	7
12	Bacteria-to-Human Protein Networks Reveal Origins of Endogenous DNA Damage. Cell, 2019, 176, 127-143.e24.	28.9	69
13	Oxygen and RNA in stress-induced mutation. Current Genetics, 2018, 64, 769-776.	1.7	7
14	Fluorescent fusions of the N protein of phage Mu label DNA damage in living cells. DNA Repair, 2018, 72, 86-92.	2.8	5
15	Stress-Induced Mutagenesis: Implications in Cancer and Drug Resistance. Annual Review of Cancer Biology, 2017, 1, 119-140.	4.5	129
16	The transcription fidelity factor GreA impedes DNA break repair. Nature, 2017, 550, 214-218.	27.8	60
17	A radical way to die. Nature Microbiology, 2017, 2, 1582-1583.	13.3	4
18	Persistent damaged bases in DNA allow mutagenic break repair in Escherichia coli. PLoS Genetics, 2017, 13, e1006733.	3.5	25

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19	Driving cancer evolution. ELife, 2017, 6, .	6.0	4
20	The Small RNA GcvB Promotes Mutagenic Break Repair by Opposing the Membrane Stress Response. Journal of Bacteriology, 2016, 198, 3296-3308.	2.2	14
21	Holliday junction trap shows how cells use recombination and a junction-guardian role of RecQ helicase. Science Advances, 2016, 2, e1601605.	10.3	39
22	The DNA polymerase III holoenzyme contains Î³ and is not a trimeric polymerase. Nucleic Acids Research, 2016, 44, 1285-1297.	14.5	34
23	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
24	Atypical Role for PhoU in Mutagenic Break Repair under Stress in Escherichia coli. PLoS ONE, 2015, 10, e0123315.	2.5	10
25	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
26	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
27	Combating Evolution to Fight Disease. Science, 2014, 343, 1088-1089.	12.6	53
28	Thymineless death is inhibited by CsrA in Escherichia coli lacking the SOS response. DNA Repair, 2013, 12, 993-999.	2.8	4
29	Evolutionary dynamics and information hierarchies in biological systems. Annals of the New York Academy of Sciences, 2013, 1305, 1-17.	3.8	6
30	R-loops and nicks initiate DNA breakage and genome instability in non-growing Escherichia coli. Nature Communications, 2013, 4, 2115.	12.8	127
31	Mutagenesis Associated with Repair of DNA Double-Strand Breaks Under Stress. , 2013, , 21-39.		2
32	Engineered proteins detect spontaneous DNA breakage in human and bacterial cells. ELife, 2013, 2, e01222.	6.0	105
33	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
34	Identity and Function of a Large Gene Network Underlying Mutagenic Repair of DNA Breaks. Science, 2012, 338, 1344-1348.	12.6	195
35	Two Mechanisms Produce Mutation Hotspots at DNA Breaks in Escherichia coli. Cell Reports, 2012, 2, 714-721.	6.4	67
36	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

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37	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
38	Antibiotic Resistance, Not Shaken or Stirred. Science, 2011, 333, 1713-1714.	12.6	8
39	Stress-Induced Loss of Heterozygosity in <i>Candida</i> : a Possible Missing Link in the Ability to Evolve. MBio, 2011, 2, .	4.1	20
40	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
41	Pathways of Resistance to Thymineless Death in Escherichia coli and the Function of UvrD. Genetics, 2011, 189, 23-36.	2.9	22
42	Genomic rearrangement in three dimensions. Nature Biotechnology, 2011, 29, 1096-1098.	17.5	4
43	Spontaneous Mutation: Real-Time inÂLiving Cells. Current Biology, 2010, 20, R810-R811.	3.9	3
44	RecQ-dependent death-by-recombination in cells lacking RecG and UvrD. DNA Repair, 2010, 9, 403-413.	2.8	18
45	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
46	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
47	Role of RecA and the SOS Response in Thymineless Death in Escherichia coli. PLoS Genetics, 2010, 6, e1000865.	3.5	57
48	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
49	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
50	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
51	Life, Death, Differentiation, and the Multicellularity of Bacteria. PLoS Genetics, 2009, 5, e1000418.	3.5	16
52	An SOS-Regulated Type 2 Toxin-Antitoxin System. Journal of Bacteriology, 2009, 191, 7456-7465.	2.2	53
53	Mechanisms of change in gene copy number. Nature Reviews Genetics, 2009, 10, 551-564.	16.3	1,066
54	Extreme Genome Repair. Cell, 2009, 136, 998-1000.	28.9	6

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55	Mutability and Importance of a Hypermutable Cell Subpopulation that Produces Stress-Induced Mutants in Escherichia coli. PLoS Genetics, 2008, 4, e1000208.	3.5	53
56	An Age-Old Problem. PLoS Genetics, 2007, 3, e37.	3.5	1
57	RecQ Promotes Toxic Recombination in Cells Lacking Recombination Intermediate-Removal Proteins. Molecular Cell, 2007, 26, 273-286.	9.7	51
58	Mutation as a Stress Response and the Regulation of Evolvability. Critical Reviews in Biochemistry and Molecular Biology, 2007, 42, 399-435.	5.2	545
59	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
60	Spontaneous DNA breakage in single living Escherichia coli cells. Nature Genetics, 2007, 39, 797-802.	21.4	182
61	Roles of E. coli double-strand-break-repair proteins in stress-induced mutation. DNA Repair, 2006, 5, 258-273.	2.8	37
62	On the Mechanism of Gene Amplification Induced under Stress in Escherichia coli. PLoS Genetics, 2006, 2, e48.	3.5	147
63	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
64	A role for topoisomerase III in a recombination pathway alternative to RuvABC. Molecular Microbiology, 2005, 58, 80-101.	2.5	55
65	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
66	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
67	Rebuttal: Growth under Selection Stimulates Lac+ Reversion (Roth and Andersson). Journal of Bacteriology, 2004, 186, 4862-4863.	2.2	8
68	Rebuttal: Adaptive Mutation in Escherichia coli (Foster). Journal of Bacteriology, 2004, 186, 4853-4853.	2.2	6
69	Adaptive Amplification and Point Mutation Are Independent Mechanisms: Evidence for Various Stress-Inducible Mutation Mechanisms. PLoS Biology, 2004, 2, e399.	5.6	74
70	Measurement of SOS expression in individual Escherichia coli K-12 cells using fluorescence microscopy. Molecular Microbiology, 2004, 53, 1343-1357.	2.5	164
71	Worming into genetic instability. Nature, 2004, 430, 625-626.	27.8	15
72	General Stress Response Regulator RpoS in Adaptive Mutation and Amplification in<i>Escherichia coli</i>. Genetics, 2004, 166, 669-680.	2.9	129

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73	Antibiotic-induced lateral transfer of antibiotic resistance. Trends in Microbiology, 2004, 12, 401-404.	7.7	139
74	Adaptive mutation and amplification in Escherichia coli: two pathways of genome adaptation under stress. Research in Microbiology, 2004, 155, 352-359.	2.1	107
75	General Stress Response Regulator RpoS in Adaptive Mutation and Amplification in <i>Escherichia coli</i>. Genetics, 2004, 166, 669-680.	2.9	49
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	MICROBIOLOGY AND EVOLUTION: Modulating Mutation Rates in the Wild. Science, 2003, 300, 1382-1383.	12.6	39
78	xni-deficient Escherichia coli are proficient for recombination and multiple pathways of repair. DNA Repair, 2003, 2, 1175-1183.	2.8	7
79	The dinB Operon and Spontaneous Mutation in Escherichia coli. Journal of Bacteriology, 2003, 185, 3972-3977.	2.2	69
80	Chromosomal System for Studying AmpC-Mediated Î²-Lactam Resistance Mutation in Escherichia coli. Antimicrobial Agents and Chemotherapy, 2002, 46, 1535-1539.	3.2	21
81	In pursuit of a molecular mechanism for adaptive gene amplification. DNA Repair, 2002, 1, 111-123.	2.8	18
82	The TGV transgenic vectors for single-copy gene expression from the Escherichia coli chromosome. Gene, 2001, 273, 97-104.	2.2	23
83	Adaptive mutations, mutator DNA polymerases and genetic change strategies of pathogens. Current Opinion in Microbiology, 2001, 4, 586-594.	5.1	79
84	SOS Mutator DNA Polymerase IV Functions in Adaptive Mutation and Not Adaptive Amplification. Molecular Cell, 2001, 7, 571-579.	9.7	270
85	Evolving responsively: adaptive mutation. Nature Reviews Genetics, 2001, 2, 504-515.	16.3	368
86	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
87	radC102 of Escherichia coliIs an Allele of recG. Journal of Bacteriology, 2000, 182, 6287-6291.	2.2	21
88	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
89	Adaptive Amplification. Cell, 2000, 103, 723-731.	28.9	141
90	Evidence That Stationary-Phase Hypermutation in the Escherichia coli Chromosome Is Promoted by Recombination. Genetics, 2000, 154, 1427-1437.	2.9	61

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91	Response to John Cairns: The Contribution of Transiently Hypermutable Cells to Mutation in Stationary Phase. Genetics, 2000, 156, 925-926.	2.9	10
92	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
93	Mechanisms of Genome-Wide Hypermutation in Stationary Phasea. Annals of the New York Academy of Sciences, 1999, 870, 275-289.	3.8	17
94	Hypermutation in stationary-phaseE. coli: tales from thelac operon. Journal of Genetics, 1999, 78, 13-20.	0.7	10
95	Gene Conversion. , 1998, , 969-973.		0
96	Transient and Heritable Mutators in Adaptive Evolution in the Lab and in Nature. Genetics, 1998, 148, 1559-1566.	2.9	112
97	Recombination-Dependent Mutation in Escherichia coli Occurs in Stationary Phase. Genetics, 1998, 149, 1163-1165.	2.9	37
98	Mismatch Repair in Escherichia coli Cells Lacking Single-Strand Exonucleases ExoI, ExoVII, and RecJ. Journal of Bacteriology, 1998, 180, 989-993.	2.2	33
99	Mismatch repair protein MutL becomes limiting during stationary-phaseâ€‰mutation. Genes and Development, 1997, 11, 2426-2437.	5.9	153
100	Mutation for survival. Current Opinion in Genetics and Development, 1997, 7, 829-834.	3.3	70
101	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
102	Genome-wide hypermutation in a subpopulation of stationary-phase cells underlies recombination-dependent adaptive mutation. EMBO Journal, 1997, 16, 3303-3311.	7.8	267
103	Recombination-dependent mutation in non-dividing cells. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1996, 350, 69-76.	1.0	39
104	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
105	Poorly Repaired Mismatches in Heteroduplex DNA are Hyper-Recombinagenic in Saccharomyces cerevisiae. Genetics, 1996, 142, 407-416.	2.9	20
106	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
107	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
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109	Recombination in Adaptive Mutation. Science, 1994, 264, 258-260.	12.6	284
110	In pursuit of a molecular mechanism for adaptive mutation. Genome, 1994, 37, 893-899.	2.0	48
111	Adaptive Mutation by Deletions in Small Mononucleotide Repeats. Science, 1994, 265, 405-407.	12.6	236
112	The split-end model for homologous recombination at double-strand breaks and at Chi. Biochimie, 1991, 73, 385-397.	2.6	90
113	Recombination of bacteriophage Î» in <i>recD</i> mutants of <i>Escherichia coli</i>. Genome, 1989, 31, 53-67.	2.0	112
114	[7] Improved in vitro packaging of Î» DNA. Methods in Enzymology, 1987, 153, 95-103.	1.0	17
115	Chi-stimulated patches are heteroduplex, with recombinant information on the phage Î» r chain. Cell, 1987, 48, 855-865.	28.9	45
116	Improved in vitro packaging of coliphage lambda DNA: a one-strain system free from endogenous phage. Gene, 1985, 38, 165-175.	2.2	89
117	EcoK restriction during in vitro packaging of coliphage lambda DNA. Gene, 1985, 39, 313-315.	2.2	22
118	DNA Replication Arrest at Protein and Transcription Barriers is Governed by DNA Supercoiling. SSRN Electronic Journal, 0, , .	0.4	0