Lorraine S Symington

List of Publications by Year
in descending order

90 papers	11,284 citations	53751 45 h-index	45285 90 g-index
114 all docs	114 docs citations	114 times ranked	7521 citing authors

#	Article	IF	Citations
1	Double-Strand Break End Resection and Repair Pathway Choice. Annual Review of Genetics, 2011, 45, 247-271.	3.2	1,264
2	Role of RAD52 Epistasis Group Genes in Homologous Recombination and Double-Strand Break Repair. Microbiology and Molecular Biology Reviews, 2002, 66, 630-670.	2.9	888
3	Sae2, Exo1 and Sgs1 collaborate in DNA double-strand break processing. Nature, 2008, 455, 770-774.	13.7	876
4	Recombination Proteins in Yeast. Annual Review of Genetics, 2004, 38, 233-271.	3.2	704
5	Microhomology-Mediated End Joining: A Back-up Survival Mechanism or Dedicated Pathway?. Trends in Biochemical Sciences, 2015, 40, 701-714.	3.7	452
6	The Nuclease Activity of Mre11 Is Required for Meiosis but Not for Mating Type Switching, End Joining, or Telomere Maintenance. Molecular and Cellular Biology, 1999, 19, 556-566.	1.1	410
7	DNA end resection: Many nucleases make light work. DNA Repair, 2009, 8, 983-995.	1.3	356
8	Mechanism and regulation of DNA end resection in eukaryotes. Critical Reviews in Biochemistry and Molecular Biology, 2016, 51, 195-212.	2.3	335
9	Mechanisms and Regulation of Mitotic Recombination in <i>Saccharomyces cerevisiae</i>. Genetics, 2014, 198, 795-835.	1.2	313
10	Template switching during break-induced replication. Nature, 2007, 447, 102-105.	13.7	300
11	Crystal structure of a Rad51 filament. Nature Structural and Molecular Biology, 2004, 11, 791-796.	3.6	265
12	Ku prevents Exo1 and Sgs1-dependent resection of DNA ends in the absence of a functional MRX complex or Sae2. EMBO Journal, 2010, 29, 3358-3369.	3.5	262
13	Break-induced replication: What is it and what is it for?. Cell Cycle, 2008, 7, 859-864.	1.3	258
14	RPA Coordinates DNA End Resection and Prevents Formation of DNA Hairpins. Molecular Cell, 2013, 50, 589-600.	4.5	225
15	End Resection at Double-Strand Breaks: Mechanism and Regulation. Cold Spring Harbor Perspectives in Biology, 2014, 6, a016436-a016436.	2.3	219
16	Nucleases and helicases take center stage in homologous recombination. Trends in Biochemical Sciences, 2009, 34, 264-272.	3.7	189
17	EXO1-A multi-tasking eukaryotic nuclease. DNA Repair, 2004, 3, 1549-1559.	1.3	176
18	RAD51 -Dependent Break-Induced Replication in Yeast. Molecular and Cellular Biology, 2004, 24, 2344-2351.	1.1	172

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19	DNA end resectionâ€"Unraveling the tail. DNA Repair, 2011, 10, 344-348.	1.3	164
20	RPA antagonizes microhomology-mediated repair of DNA double-strand breaks. Nature Structural and Molecular Biology, 2014, 21, 405-412.	3.6	162
21	Break-induced replication occurs by conservative DNA synthesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13475-13480.	3.3	156
22	Overlapping Functions of the <i>Saccharomyces cerevisiae</i> Mre11, Exo1 and Rad27 Nucleases in DNA Metabolism. Genetics, 2001, 159, 1423-1433.	1.2	151
23	Mus81 and Yen1 Promote Reciprocal Exchange during Mitotic Recombination to Maintain Genome Integrity in Budding Yeast. Molecular Cell, 2010, 40, 988-1000.	4.5	150
24	The Mre11 Nuclease Is Not Required for 5â€² to 3â€² Resection at Multiple HO-Induced Double-Strand Breaks. Molecular and Cellular Biology, 2004, 24, 9682-9694.	1.1	143
25	The Yeast Recombinational Repair Protein Rad59 Interacts With Rad52 and Stimulates Single-Strand Annealing. Genetics, 2001, 159, 515-525.	1.2	126
26	DNA End Resection: Mechanism and Control. Annual Review of Genetics, 2021, 55, 285-307.	3.2	105
27	Mutations in yeast Rad51 that partially bypass the requirement for Rad55 and Rad57 in DNA repair by increasing the stability of Rad51-DNA complexes. EMBO Journal, 2002, 21, 3160-3170.	3.5	104
28	RAD51 Is Required for the Repair of Plasmid Double-Stranded DNA Gaps from Either Plasmid or Chromosomal Templates. Molecular and Cellular Biology, 2000, 20, 1194-1205.	1.1	96
29	The Cdk/Cdc14 Module Controls Activation of the Yen1 Holliday Junction Resolvase to Promote Genome Stability. Molecular Cell, 2014, 54, 80-93.	4.5	91
30	Intramolecular recombination of linear DNA catalyzed by the Escherichia coli RecE recombination system. Journal of Molecular Biology, 1985, 186, 515-525.	2.0	89
31	DNA Repair Mechanisms and Their Biological Roles in the Malaria Parasite Plasmodium falciparum. Microbiology and Molecular Biology Reviews, 2014, 78, 469-486.	2.9	88
32	Aberrant Double-Strand Break Repair Resulting in Half Crossovers in Mutants Defective for Rad51 or the DNA Polymerase Î´ Complex. Molecular and Cellular Biology, 2009, 29, 1432-1441.	1.1	82
33	Mutations in Mre11 Phosphoesterase Motif I That Impair Saccharomyces cerevisiae Mre11-Rad50-Xrs2 Complex Stability in Addition to Nuclease Activity. Genetics, 2005, 171, 1561-1570.	1.2	76
34	Genetic recombination of homologous plasmids catalyzed by cell-free extracts of saccharomyces cerevisiae. Cell, 1983, 35, 805-813.	13.5	73
35	Role of the Mre11 Complex in Preserving Genome Integrity. Genes, 2018, 9, 589.	1.0	73
36	Decreased Meiotic Intergenic Recombination and Increased Meiosis I Nondisjunction in exo1 Mutants of Saccharomyces cerevisiae. Genetics, 2000, 156, 1549-1557.	1.2	71

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37	Xrs2 Dependent and Independent Functions of the Mre11-Rad50 Complex. Molecular Cell, 2016, 64, 405-415.	4.5	66
38	DNA Polymerase Delta Synthesizes Both Strands during Break-Induced Replication. Molecular Cell, 2019, 76, 371-381.e4.	4.5	65
39	Role of the <i>Saccharomyces cerevisiae</i> Rad51 Paralogs in Sister Chromatid Recombination. Genetics, 2008, 178, 113-126.	1.2	63
40	The Requirement for ATP Hydrolysis by Saccharomyces cerevisiae Rad51 Is Bypassed by Mating-Type Heterozygosity or RAD54 in High Copy. Molecular and Cellular Biology, 2002, 22, 6336-6343.	1.1	60
41	A Novel Allele of RAD52 That Causes Severe DNA Repair and Recombination Deficiencies Only in the Absence of RAD51 or RAD59. Genetics, 1999, 153, 1117-1130.	1.2	60
42	Mre11-Sae2 and RPA Collaborate to Prevent Palindromic Gene Amplification. Molecular Cell, 2015, 60, 500-508.	4.5	59
43	Aberrant Double-Strand Break Repair in rad51 Mutants of Saccharomyces cerevisiae. Molecular and Cellular Biology, 2000, 20, 9162-9172.	1.1	57
44	Template Switching During Break-Induced Replication Is Promoted by the Mph1 Helicase in <i>Saccharomyces cerevisiae</i>. Genetics, 2014, 196, 1017-1028.	1.2	56
45	Some disassembly required: role of DNA translocases in the disruption of recombination intermediates and dead-end complexes. Genes and Development, 2006, 20, 2479-2486.	2.7	54
46	Mph1 and Mus81-Mms4 Prevent Aberrant Processing of Mitotic Recombination Intermediates. Molecular Cell, 2013, 52, 63-74.	4.5	52
47	RPA Stabilization of Single-Stranded DNA Is Critical for Break-Induced Replication. Cell Reports, 2016, 17, 3359-3368.	2.9	52
48	Guidelines for DNA recombination and repair studies: Cellular assays of DNA repair pathways. Microbial Cell, 2019, 6, 1-64.	1.4	47
49	The Rad52â€“Rad59 complex interacts with Rad51 and replication protein A. DNA Repair, 2003, 2, 1127-1134.	1.3	45
50	The Rad51 paralog complex Rad55-Rad57 acts as a molecular chaperone during homologous recombination. Molecular Cell, 2021, 81, 1043-1057.e8.	4.5	45
51	Sae2 promotes DNA damage resistance by removing the Mre11â€“Rad50â€“Xrs2 complex from DNA and attenuating Rad53 signaling. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1880-7.	3.3	44
52	Gene targeting in yeast is initiated by two independent strand invasions. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15392-15397.	3.3	42
53	The rad51-K191R ATPase-Defective Mutant Is Impaired forPresynaptic Filament Formation. Molecular and Cellular Biology, 2006, 26, 9544-9554.	1.1	40
54	The Rad1-Rad10 nuclease promotes chromosome translocations between dispersed repeats. Nature Structural and Molecular Biology, 2012, 19, 964-971.	3.6	40

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55	Defining the influence of Rad51 and Dmc1 lineage-specific amino acids on genetic recombination. Genes and Development, 2019, 33, 1191-1207.	2.7	38
56	Suppression of the Double-Strand-Break-Repair Defect of the <i>Saccharomyces cerevisiae rad57</i> Mutant. Genetics, 2009, 181, 1195-1206.	1.2	37
57	Sae2 antagonizes Rad9 accumulation at DNA double-strand breaks to attenuate checkpoint signaling and facilitate end resection. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11961-E11969.	3.3	37
58	Opposing roles for DNA structure-specific proteins Rad1, Msh2, Msh3, and Sgs1 in yeast gene targeting. EMBO Journal, 2005, 24, 2214-2223.	3.5	35
59	Extensive DNA End Processing by Exo1 and Sgs1 Inhibits Break-Induced Replication. PLoS Genetics, 2010, 6, e1001007.	1.5	34
60	RAD51-independent inverted-repeat recombination by a strand-annealing mechanism. DNA Repair, 2011, 10, 408-415.	1.3	33
61	Replication protein A prevents promiscuous annealing between short sequence homologies: Implications for genome integrity. BioEssays, 2015, 37, 305-313.	1.2	33
62	Crossed-Stranded DNA Structures for investigating the Molecular Dynamics of the Holliday Junction. Journal of Molecular Biology, 1993, 229, 812-820.	2.0	30
63	Meiotic recombination within the centromere of a yeast chromosome. Cell, 1988, 52, 237-240.	13.5	29
64	A unified molecular mechanism for the regulation of acetyl-CoA carboxylase by phosphorylation. Cell Discovery, 2016, 2, 16044.	3.1	29
65	Breaking Up Just Got Easier to Do. Cell, 2009, 138, 20-22.	13.5	21
66	Overcoming the chromatin barrier to end resection. Cell Research, 2013, 23, 317-319.	5.7	21
67	Mechanism for inverted-repeat recombination induced by a replication fork barrier. Nature Communications, 2022, 13, 32.	5.8	21
68	Xrs2 and Tel1 Independently Contribute to MR-Mediated DNA Tethering and Replisome Stability. Cell Reports, 2018, 25, 1681-1692.e4.	2.9	19
69	DNA end resection during homologous recombination. Current Opinion in Genetics and Development, 2021, 71, 99-105.	1.5	19
70	Unique and overlapping functions of the Exo1, Mre11 and Pso2 nucleases in DNA repair. DNA Repair, 2008, 7, 655-662.	1.3	18
71	Phosphoproteomics reveals a distinctive Mec1/ATR signaling response upon DNA end hyperâ€resection. EMBO Journal, 2021, 40, e104566.	3.5	17
72	Stressing Out About RAD52. Molecular Cell, 2016, 64, 1017-1019.	4.5	16

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73	CDK and Mec1/Tel1-catalyzed phosphorylation of Sae2 regulate different responses to DNA damage. Nucleic Acids Research, 2019, 47, 11238-11249.	6.5	16
74	The dark side of homology-directed repair. DNA Repair, 2021, 106, 103181.	1.3	16
75	Making the cut. Nature, 2014, 514, 39-40.	13.7	15
76	Rad51 gain-of-function mutants that exhibit high affinity DNA binding cause DNA damage sensitivity in the absence of Srs2. Nucleic Acids Research, 2008, 36, 6504-6510.	6.5	13
77	Resection Activity of the Sgs1 Helicase Alters the Affinity of DNA Ends for Homologous Recombination Proteins in<i>Saccharomyces cerevisiae</i>. Genetics, 2013, 195, 1241-1251.	1.2	13
78	MOLECULAR BIOLOGY: New Year's Resolution--Resolving Resolvases. Science, 2004, 303, 184-185.	6.0	12
79	Interstitial telomere sequences disrupt break-induced replication and drive formation of ectopic telomeres. Nucleic Acids Research, 2020, 48, 12697-12710.	6.5	12
80	Efficient DNA double-strand break formation at single or multiple defined sites in theSaccharomyces cerevisiaegenome. Nucleic Acids Research, 2020, 48, e115-e115.	6.5	12
81	Sgs1â€"The Maestro of Recombination. Cell, 2012, 149, 257-259.	13.5	11
82	Processing of DNA Double-Strand Breaks in Yeast. Methods in Enzymology, 2018, 600, 1-24.	0.4	10
83	Resolving Resolvases: The Final Act?. Molecular Cell, 2008, 32, 603-604.	4.5	9
84	Sgs1 and Exo1 suppress targeted chromosome duplication during ends-in and ends-out gene targeting. DNA Repair, 2014, 22, 12-23.	1.3	9
85	Keeping it real: MRXâ€“Sae2 clipping of natural substrates. Genes and Development, 2017, 31, 2311-2312.	2.7	7
86	Identification of Nucleases and Phosphatases by Direct Biochemical Screen of the Saccharomyces cerevisiae Proteome. PLoS ONE, 2009, 4, e6993.	1.1	5
87	Initiation and completion of spontaneous mitotic recombination occur in different cell cycle phases. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8045-8046.	3.3	2
88	Recognition for Discoveries in DNA Repair. New England Journal of Medicine, 2019, 381, 677-679.	13.9	1
89	Mechanism and regulation of DNA end processing. FASEB Journal, 2012, 26, 102.1.	0.2	0
90	Intrachromosomal Recombination in Yeast. Methods in Molecular Biology, 2021, 2153, 193-200.	0.4	0