Eric Alani

List of Publications by Year
in descending order

73 papers	4,940 citations	76326 40 h-index	102487 66 g-index
79 all docs	79 docs citations	79 times ranked	3447 citing authors

#	Article	IF	Citations
1	A pathway for generation and processing of double-strand breaks during meiotic recombination in S. cerevisiae. Cell, 1990, 61, 1089-1101.	28.9	774
2	Dynamic Basis for One-Dimensional DNA Scanning by the Mismatch Repair Complex Msh2-Msh6. Molecular Cell, 2007, 28, 359-370.	9.7	215
3	Heteroduplex rejection during single-strand annealing requires Sgs1 helicase and mismatch repair proteins Msh2 and Msh6 but not Pms1. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9315-9320.	7.1	187
4	Visualizing one-dimensional diffusion of eukaryotic DNA repair factors along a chromatin lattice. Nature Structural and Molecular Biology, 2010, 17, 932-938.	8.2	175
5	DNA bending and unbending by MutS govern mismatch recognition and specificity. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14822-14827.	7.1	170
6	Competing Crossover Pathways Act During Meiosis in Saccharomyces cerevisiae. Genetics, 2004, 168, 1805-1816.	2.9	156
7	Mlh1-Mlh3, a Meiotic Crossover and DNA Mismatch Repair Factor, Is a Msh2-Msh3-stimulated Endonuclease. Journal of Biological Chemistry, 2014, 289, 5664-5673.	3.4	124
8	A Mutation in the Putative MLH3 Endonuclease Domain Confers a Defect in Both Mismatch Repair and Meiosis in<i>Saccharomyces cerevisiae</i>. Genetics, 2008, 179, 747-755.	2.9	120
9	Csm4, in Collaboration with Ndj1, Mediates Telomere-Led Chromosome Dynamics and Recombination during Yeast Meiosis. PLoS Genetics, 2008, 4, e1000188.	3.5	117
10	Roles for Mismatch Repair Factors in Regulating Genetic Recombination. Molecular and Cellular Biology, 2000, 20, 7839-7844.	2.3	97
11	The Saccharomyces cerevisiae Msh2 Mismatch Repair Protein Localizes to Recombination Intermediates In Vivo. Molecular Cell, 2000, 5, 789-799.	9.7	97
12	Roles for mismatch repair family proteins in promoting meiotic crossing over. DNA Repair, 2016, 38, 84-93.	2.8	96
13	Saccharomyces cerevisiae MSH2, a mispaired base recognition protein, also recognizes Holliday junctions in DNA. Journal of Molecular Biology, 1997, 265, 289-301.	4.2	94
14	A Mutation in the MSH6 Subunit of the Saccharomyces cerevisiae MSH2-MSH6 Complex Disrupts Mismatch Recognition. Journal of Biological Chemistry, 1999, 274, 16115-16125.	3.4	89
15	The Baker's Yeast Diploid Genome Is Remarkably Stable in Vegetative Growth and Meiosis. PLoS Genetics, 2010, 6, e1001109.	3.5	89
16	Evolutionary rate covariation reveals shared functionality and coexpression of genes. Genome Research, 2012, 22, 714-720.	5.5	89
17	<i>Saccharomyces cerevisiae</i> Msh2p and Msh6p ATPase Activities Are Both Required during Mismatch Repair. Molecular and Cellular Biology, 1998, 18, 7590-7601.	2.3	88
18	Systematic Mutagenesis of the <i>Saccharomyces cerevisiae MLH1</i> Gene Reveals Distinct Roles for Mlh1p in Meiotic Crossing Over and in Vegetative and Meiotic Mismatch Repair. Molecular and Cellular Biology, 2003, 23, 873-886.	2.3	80

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19	Mismatch Repair Factor MSH2-MSH3 Binds and Alters the Conformation of Branched DNA Structures Predicted to form During Genetic Recombination. Journal of Molecular Biology, 2006, 360, 523-536.	4.2	78
20	Distinct Roles for the Saccharomyces cerevisiae Mismatch Repair Proteins in Heteroduplex Rejection, Mismatch Repair and Nonhomologous Tail Removal. Genetics, 2005, 169, 563-574.	2.9	77
21	Analysis of Interactions Between Mismatch Repair Initiation Factors and the Replication Processivity Factor PCNA. Journal of Molecular Biology, 2006, 355, 175-184.	4.2	77
22	Negative epistasis between natural variants of the Saccharomyces cerevisiae MLH1 and PMS1 genes results in a defect in mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3256-3261.	7.1	76
23	A tale of tails: insights into the coordination of 3â€² end processing during homologous recombination. BioEssays, 2009, 31, 315-321.	2.5	73
24	Understanding how mismatch repair proteins participate in the repair/anti-recombination decision. FEMS Yeast Research, 2016, 16, fow071.	2.3	73
25	MSH-MLH complexes formed at a DNA mismatch are disrupted by the PCNA sliding clamp. Journal of Molecular Biology, 2001, 306, 957-968.	4.2	71
26	Genetic Analysis of Baker's Yeast Msh4-Msh5 Reveals a Threshold Crossover Level for Meiotic Viability. PLoS Genetics, 2010, 6, e1001083.	3.5	68
27	Separation-of-Function Mutations in <i>Saccharomyces cerevisiae MSH2</i> That Confer Mismatch Repair Defects but Do Not Affect Nonhomologous-Tail Removal during Recombination. Molecular and Cellular Biology, 1999, 19, 7558-7567.	2.3	66
28	Identification and Dissection of a Complex DNA Repair Sensitivity Phenotype in Baker's Yeast. PLoS Genetics, 2008, 4, e1000123.	3.5	66
29	<i>EXO1</i> and <i>MSH6</i> Are High-Copy Suppressors of Conditional Mutations in the <i>MSH2</i> Mismatch Repair Gene of <i>Saccharomyces cerevisiae</i>. Genetics, 2000, 155, 589-599.	2.9	65
30	The pch2Î” Mutation in Baker's Yeast Alters Meiotic Crossover Levels and Confers a Defect in Crossover Interference. PLoS Genetics, 2009, 5, e1000571.	3.5	63
31	The mismatch repair and meiotic recombination endonuclease Mlh1-Mlh3 is activated by polymer formation and can cleave DNA substrates in trans. PLoS Biology, 2017, 15, e2001164.	5.6	63
32	Identification of rad27 Mutations That Confer Differential Defects in Mutation Avoidance, Repeat Tract Instability, and Flap Cleavage. Molecular and Cellular Biology, 2001, 21, 4889-4899.	2.3	60
33	High-Throughput Universal DNA Curtain Arrays for Single-Molecule Fluorescence Imaging. Langmuir, 2015, 31, 10310-10317.	3.5	59
34	Detection of High-Affinity and Sliding Clamp Modes for MSH2-MSH6 by Single-Molecule Unzipping Force Analysis. Molecular Cell, 2005, 20, 771-781.	9.7	53
35	Multiple cellular mechanisms prevent chromosomal rearrangements involving repetitive DNA. Critical Reviews in Biochemistry and Molecular Biology, 2012, 47, 297-313.	5.2	53
36	Crystal Structure and Biochemical Analysis of the MutSÂ·ADPÂ·Beryllium Fluoride Complex Suggests a Conserved Mechanism for ATP Interactions in Mismatch Repair. Journal of Biological Chemistry, 2003, 278, 16088-16094.	3.4	47

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37	Saccharomyces cerevisiae MSH2â€“MSH3 and MSH2â€“MSH6 Complexes Display Distinct Requirements for DNA Binding Domain I in Mismatch Recognition. Journal of Molecular Biology, 2007, 366, 53-66.	4.2	46
38	Genomic mutation rates: what highâ€throughput methods can tell us. BioEssays, 2009, 31, 912-920.	2.5	46
39	A New Type of Fusion Analysis Applicable to Many Organisms: Protein Fusions to the <i>URA3</i> Gene of Yeast. Genetics, 1987, 117, 5-12.	2.9	46
40	Sustained and Rapid Chromosome Movements Are Critical for Chromosome Pairing and Meiotic Progression in Budding Yeast. Genetics, 2011, 188, 21-32.	2.9	43
41	Characterization of the Repeat-Tract Instability and Mutator Phenotypes Conferred by a Tn3 Insertion in RFC1, the Large Subunit of the Yeast Clamp Loader. Genetics, 1999, 151, 499-509.	2.9	43
42	msh2 Separation of Function Mutations Confer Defects in the Initiation Steps of Mismatch Repair. Journal of Molecular Biology, 2003, 331, 123-138.	4.2	41
43	Analysis of yeast MSH2-MSH6 suggests that the initiation of mismatch repair can be separated into discrete steps 1 1Edited by M. Gottesman. Journal of Molecular Biology, 2000, 302, 327-338.	4.2	40
44	Incompatibilities Involving Yeast Mismatch Repair Genes: A Role for Genetic Modifiers and Implications for Disease Penetrance and Variation in Genomic Mutation Rates. PLoS Genetics, 2008, 4, e1000103.	3.5	38
45	The effect of genetic background on the function of Saccharomyces cerevisiae mlh1 alleles that correspond to HNPCC missense mutations. Human Molecular Genetics, 2007, 16, 445-452.	2.9	36
46	Analysis of Conditional Mutations in the <i>Saccharomyces cerevisiae MLH1</i> Gene in Mismatch Repair and in Meiotic Crossing Over. Genetics, 2002, 160, 909-921.	2.9	35
47	Mutants Defective in Rad1-Rad10-Slx4 Exhibit a Unique Pattern of Viability During Mating-Type Switching in Saccharomyces cerevisiae. Genetics, 2008, 179, 1807-1821.	2.9	34
48	Evolutionary Rate Covariation in Meiotic Proteins Results from Fluctuating Evolutionary Pressure in Yeasts and Mammals. Genetics, 2013, 193, 529-538.	2.9	34
49	Genomic Instability Promoted by Overexpression of Mismatch Repair Factors in Yeast: A Model for Understanding Cancer Progression. Genetics, 2018, 209, 439-456.	2.9	34
50	mlh3 mutations in bakerâ€™s yeast alter meiotic recombination outcomes by increasing noncrossover events genome-wide. PLoS Genetics, 2017, 13, e1006974.	3.5	32
51	A Delicate Balance Between Repair and Replication Factors Regulates Recombination Between Divergent DNA Sequences in<i>Saccharomyces cerevisiae</i>. Genetics, 2016, 202, 525-540.	2.9	31
52	The Unstructured Linker Arms of Mlh1â€“Pms1 Are Important for Interactions with DNA during Mismatch Repair. Journal of Molecular Biology, 2012, 422, 192-203.	4.2	30
53	Genetic Analysis of mlh3 Mutations Reveals Interactions Between Crossover Promoting Factors During Meiosis in Bakerâ€™s Yeast. G3: Genes, Genomes, Genetics, 2013, 3, 9-22.	1.8	30
54	Mutation Hot Spots in Yeast Caused by Long-Range Clustering of Homopolymeric Sequences. Cell Reports, 2012, 1, 36-42.	6.4	28

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55	A mutation in the endonuclease domain of mouse MLH3 reveals novel roles for MutLÎ³ during crossover formation in meiotic prophase I. PLoS Genetics, 2019, 15, e1008177.	3.5	25
56	Intrinsically disordered regions regulate both catalytic and non-catalytic activities of the MutLÎ± mismatch repair complex. Nucleic Acids Research, 2019, 47, 1823-1835.	14.5	24
57	Detection of Heterozygous Mutations in the Genome of Mismatch Repair Defective Diploid Yeast Using a Bayesian Approach. Genetics, 2010, 186, 493-503.	2.9	23
58	Mismatch Repair Incompatibilities in Diverse Yeast Populations. Genetics, 2017, 205, 1459-1471.	2.9	22
59	Multiple Factors Insulate Msh2â€"Msh6 Mismatch Repair Activity from Defects in Msh2 Domain I. Journal of Molecular Biology, 2011, 411, 765-780.	4.2	19
60	Incompatibilities in Mismatch Repair Genes <i>MLH1-PMS1</i> Contribute to a Wide Range of Mutation Rates in Human Isolates of Bakerâ€™s Yeast. Genetics, 2018, 210, 1253-1266.	2.9	17
61	Coordinated and Independent Roles for MLH Subunits in DNA Repair. Cells, 2021, 10, 948.	4.1	17
62	Expanded roles for the MutL family of DNA mismatch repair proteins. Yeast, 2021, 38, 39-53.	1.7	16
63	Bakerâ€™s Yeast Clinical Isolates Provide a Model for How Pathogenic Yeasts Adapt to Stress. Trends in Genetics, 2019, 35, 804-817.	6.7	13
64	Accumulation of Recessive Lethal Mutations in Saccharomyces cerevisiae mlh1 Mismatch Repair Mutants Is Not Associated With Gross Chromosomal Rearrangements. Genetics, 2006, 174, 519-523.	2.9	11
65	Chromatin Immunoprecipitation to Investigate Proteinâ€"DNA Interactions During Genetic Recombination. , 2004, 262, 223-238.		8
66	Chromatin Modifiers Alter Recombination Between Divergent DNA Sequences. Genetics, 2019, 212, 1147-1162.	2.9	7
67	DNA replication and mismatch repair safeguard against metabolic imbalances. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5561-5563.	7.1	6
68	Handcuffing intrinsically disordered regions in Mlh1â€"Pms1 disrupts mismatch repair. Nucleic Acids Research, 2021, 49, 9327-9341.	14.5	5
69	Collaborations between chromatin and nuclear architecture to optimize DNA repair fidelity. DNA Repair, 2021, 97, 103018.	2.8	4
70	Experimental exchange of paralogous domains in the MLH family provides evidence of sub-functionalization after gene duplication. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	2
71	The DNA damage checkpoint allows recombination between divergent DNA sequences in budding yeast. DNA Repair, 2011, 10, 1086-1094.	2.8	1
72	Pch2 is a meiotic hexameric ATPase that binds to and alters Hop1 functions. FASEB Journal, 2013, 27, 973.1.	0.5	0

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73	Hundreds of thousands of cell generations reveal a treasure chest of genome alterations. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31567-31569.	7.1	0