Paul L Modrich

List of Publications by Year
in descending order

104 papers	14,536 citations	22153 59 h-index	30922 102 g-index
105 all docs	105 docs citations	105 times ranked	7913 citing authors

#	Article	IF	Citations
1	Human MutLÎ³, the MLH1â€"MLH3 heterodimer, is an endonuclease that promotes DNA expansion. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3535-3542.	7.1	52
2	The mutagen and carcinogen cadmium is a high-affinity inhibitor of the zinc-dependent MutLÎ± endonuclease. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7314-7319.	7.1	22
3	Interaction of proliferating cell nuclear antigen with PMS2 is required for MutLÎ± activation and function in mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4930-4935.	7.1	41
4	Mechanisms in <i>E. coli</i> and Human Mismatch Repair (Nobel Lecture). Angewandte Chemie - International Edition, 2016, 55, 8490-8501.	13.8	76
5	The C-terminal 20 Amino Acids of Drosophila Topoisomerase 2 Are Required for Binding to a BRCA1 C Terminus (BRCT) Domain-containing Protein, Mus101, and Fidelity of DNA Segregation. Journal of Biological Chemistry, 2016, 291, 13216-13228.	3.4	3
6	Mechanismen der Fehlpaarungsreparatur in <i>E. coli</i> und im Menschen (Nobelâ€Aufsatz). Angewandte Chemie, 2016, 128, 8630-8642.	2.0	0
7	MutL traps MutS at a DNA mismatch. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10914-10919.	7.1	58
8	Coupling of Human DNA Excision Repair and the ATRâ€mediated DNA Damage Checkpoint. FASEB Journal, 2015, 29, 490.1.	0.5	1
9	Hydrolytic function of Exo1 in mammalian mismatch repair. Nucleic Acids Research, 2014, 42, 7104-7112.	14.5	25
10	Coupling of Human DNA Excision Repair and the DNA Damage Checkpoint in a Defined in Vitro System. Journal of Biological Chemistry, 2014, 289, 5074-5082.	3.4	51
11	Christian Raetz: Scientist and Friend Extraordinaire. Annual Review of Biochemistry, 2013, 82, 1-24.	11.1	9
12	Extrahelical (CAG)/(CTG) triplet repeat elements support proliferating cell nuclear antigen loading and MutLÎ± endonuclease activation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12277-12282.	7.1	65
13	Structures of Human Exonuclease 1 DNA Complexes Suggest a Unified Mechanism for Nuclease Family. Cell, 2011, 145, 212-223.	28.9	136
14	PARP-1 enhances the mismatch-dependence of 5â€²-directed excision in human mismatch repair in vitro. DNA Repair, 2011, 10, 1145-1153.	2.8	47
15	Purification, crystallization and preliminary X-ray diffraction analysis of the human mismatch repair protein MutSÎ². Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 947-952.	0.7	3
16	BLMâ€"DNA2â€"RPAâ€"MRN and EXO1â€"BLMâ€"RPAâ€"MRN constitute two DNA end resection machineries for human DNA break repair. Genes and Development, 2011, 25, 350-362.	5.9	585
17	PMS2 endonuclease activity has distinct biological functions and is essential for genome maintenance. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13384-13389.	7.1	68
18	MutLÎ± and Proliferating Cell Nuclear Antigen Share Binding Sites on MutSÎ². Journal of Biological Chemistry, 2010, 285, 11730-11739.	3.4	52

#	Article	IF	Citations
19	Interactions of Human Mismatch Repair Proteins MutSÎ± and MutLÎ± with Proteins of the ATR-Chk1 Pathway. Journal of Biological Chemistry, 2010, 285, 5974-5982.	3.4	68
20	PCNA function in the activation and strand direction of MutLÎ± endonuclease in mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16066-16071.	7.1	239
21	Structure of the Endonuclease Domain of MutL: Unlicensed to Cut. Molecular Cell, 2010, 39, 145-151.	9.7	122
22	Interactions of human mismatch repair proteins MutSalpha and MutLalpha with proteins of the ATRâ€Chk1 pathway. FASEB Journal, 2010, 24, 492.10.	0.5	0
23	A possible mechanism for exonuclease 1-independent eukaryotic mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8495-8500.	7.1	120
24	Functions of MutLÎ±, Replication Protein A (RPA), and HMGB1 in 5â€²-Directed Mismatch Repair. Journal of Biological Chemistry, 2009, 284, 21536-21544.	3.4	48
25	Mismatch repair and nucleotide excision repair proteins cooperate in the recognition of DNA interstrand crosslinks. Nucleic Acids Research, 2009, 37, 4420-4429.	14.5	75
26	Involvement of the Î² Clamp in Methyl-directed Mismatch Repair in Vitro. Journal of Biological Chemistry, 2009, 284, 32782-32791.	3.4	45
27	Direct Visualization of Asymmetric Adenine Nucleotide-Induced Conformational Changes in MutLÎ±. Molecular Cell, 2008, 29, 112-121.	9.7	117
28	Mismatch Repair Deficiency Does Not Mediate Clinical Resistance to Temozolomide in Malignant Glioma. Clinical Cancer Research, 2008, 14, 4859-4868.	7.0	67
29	Human exonuclease 1 and BLM helicase interact to resect DNA and initiate DNA repair. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16906-16911.	7.1	265
30	The MutSÎ±-Proliferating Cell Nuclear Antigen Interaction in Human DNA Mismatch Repair. Journal of Biological Chemistry, 2008, 283, 13310-13319.	3.4	40
31	Protein roadblocks and helix discontinuities are barriers to the initiation of mismatch repair. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 12709-12713.	7.1	64
32	Structure of the Human MutSÎ± DNA Lesion Recognition Complex. Molecular Cell, 2007, 26, 579-592.	9.7	311
33	Saccharomyces cerevisiae MutLÎ± Is a Mismatch Repair Endonuclease. Journal of Biological Chemistry, 2007, 282, 37181-37190.	3.4	217
34	Endonucleolytic Function of MutLÎ± in Human Mismatch Repair. Cell, 2006, 126, 297-308.	28.9	553
35	Engineering Life: Building a FAB for Biology. Scientific American, 2006, 294, 44-51.	1.0	165
36	DNA Mismatch Repair:â€‰ Functions and Mechanisms. Chemical Reviews, 2006, 106, 302-323.	47.7	771

#	Article	IF	Citations
37	A phase II window trial of procarbazine and topotecan in children with high-grade glioma: a report from the childrenâ€™s oncology group. Journal of Neuro-Oncology, 2006, 77, 193-198.	2.9	23
38	Analysis of the Excision Step in Human DNA Mismatch Repair. Methods in Enzymology, 2006, 408, 273-284.	1.0	13
39	Mechanisms in Eukaryotic Mismatch Repair. Journal of Biological Chemistry, 2006, 281, 30305-30309.	3.4	372
40	Mismatch Repair-dependent Iterative Excision at Irreparable O6-Methylguanine Lesions in Human Nuclear Extracts. Journal of Biological Chemistry, 2006, 281, 22674-22683.	3.4	76
41	The Î² Sliding Clamp Binds to Multiple Sites within MutL and MutS. Journal of Biological Chemistry, 2006, 281, 14340-14349.	3.4	80
42	Poly(ADP-ribose) polymerase-1 inhibition reverses temozolomide resistance in a DNA mismatch repairâ€"deficient malignant glioma xenograft. Molecular Cancer Therapeutics, 2005, 4, 1364-1368.	4.1	173
43	Human Mismatch Repair. Journal of Biological Chemistry, 2005, 280, 39752-39761.	3.4	195
44	HIF-1Î± Induces Genetic Instability by Transcriptionally Downregulating MutSÎ± Expression. Molecular Cell, 2005, 17, 793-803.	9.7	332
45	Early thinking on the nature of mismatch repair. DNA Repair, 2005, 4, 103-131.	2.8	1
46	Differential Specificities and Simultaneous Occupancy of Human MutSÎ± Nucleotide Binding Sites. Journal of Biological Chemistry, 2004, 279, 28402-28410.	3.4	47
47	The mismatch DNA repair heterodimer, hMSH2/6, regulates BLM helicase. Oncogene, 2004, 23, 3749-3756.	5.9	66
48	Targeting Wide-Range Oncogenic Transformation via PU24FCl, a Specific Inhibitor of Tumor Hsp90. Chemistry and Biology, 2004, 11, 787-797.	6.0	159
49	A Defined Human System That Supports Bidirectional Mismatch-Provoked Excision. Molecular Cell, 2004, 15, 31-41.	9.7	210
50	Brain tumor cell lines resistant to O6-benzylguanine/1,3-bis(2-chloroethyl)-1-nitrosourea chemotherapy have O6-alkylguanine-DNA alkyltransferase mutations. Molecular Cancer Therapeutics, 2004, 3, 1127-35.	4.1	28
51	Mechanism of 5â€²-Directed Excision in Human Mismatch Repair. Molecular Cell, 2003, 12, 1077-1086.	9.7	219
52	Differential and Simultaneous Adenosine Di- and Triphosphate Binding by MutS. Journal of Biological Chemistry, 2003, 278, 18557-18562.	3.4	54
53	Assembly and Molecular Activities of the MutS Tetramer. Journal of Biological Chemistry, 2003, 278, 34667-34673.	3.4	58
54	Hydrolytically Deficient MutS E694A Is Defective in the MutL-dependent Activation of MutH and in the Mismatch-dependent Assembly of the MutS Â· MutL Â· Heteroduplex Complex. Journal of Biological Chemistry, 2003, 278, 49505-49511.	3.4	19

#	Article	IF	Citations
55	Human Exonuclease I Is Required for 5â€² and 3â€² Mismatch Repair. Journal of Biological Chemistry, 2002, 277, 13302-13311.	3.4	208
56	Mechanisms of resistance to 1,3-bis(2-chloroethyl)-1-nitrosourea in human medulloblastoma and rhabdomyosarcoma. Molecular Cancer Therapeutics, 2002, 1, 727-36.	4.1	28
57	DNA Chain Length Dependence of Formation and Dynamics of hMutSÎ±Â·hMutLÎ±Â·Heteroduplex Complexes. Journal of Biological Chemistry, 2001, 276, 33233-33240.	3.4	90
58	Distinct MutS DNA-binding Modes That Are Differentially Modulated by ATP Binding and Hydrolysis. Journal of Biological Chemistry, 2001, 276, 34339-34347.	3.4	82
59	Redundant Exonuclease Involvement in Escherichia coli Methyl-directed Mismatch Repair. Journal of Biological Chemistry, 2001, 276, 31053-31058.	3.4	114
60	Identifying sequence similarities between DNA molecules. Ultramicroscopy, 2000, 82, 237-244.	1.9	3
61	Somatic mutation of hPMS2 as a possible cause of sporadic human colon cancer with microsatellite instability. Oncogene, 2000, 19, 2249-2256.	5.9	30
62	The MutL ATPase Is Required for Mismatch Repair. Journal of Biological Chemistry, 2000, 275, 9863-9869.	3.4	113
63	Modulation of MutS ATP Hydrolysis by DNA Cofactorsâ€. Biochemistry, 2000, 39, 3176-3183.	2.5	85
64	Repair of Large Insertion/Deletion Heterologies in Human Nuclear Extracts Is Directed by a 5â€² Single-strand Break and Is Independent of the Mismatch Repair System. Journal of Biological Chemistry, 1999, 274, 7474-7481.	3.4	36
65	Multiple DNA repair mechanisms and alkylator resistance in the human medulloblastoma cell line D-283 Med (4-HCR). Cancer Chemotherapy and Pharmacology, 1999, 43, 73-79.	2.3	17
66	Modulation of cyclophosphamide activity by O ? 6 -alkylguanine-DNA alkyltransferase. Cancer Chemotherapy and Pharmacology, 1999, 43, 80-85.	2.3	47
67	The Kinetic Mechanism of EcoRI Endonuclease. Journal of Biological Chemistry, 1999, 274, 31896-31902.	3.4	61
68	Increased transversions in a novel mutator colon cancer cell line. Oncogene, 1998, 16, 1125-1130.	5.9	13
69	Therapeutic efficacy of vinorelbine against pediatric and adult central nervous system tumors. Cancer Chemotherapy and Pharmacology, 1998, 42, 479-482.	2.3	17
70	Isolation of MutSÎ² from Human Cells and Comparison of the Mismatch Repair Specificities of MutSÎ² and MutSÎ±. Journal of Biological Chemistry, 1998, 273, 19895-19901.	3.4	355
71	Mismatch-, MutS-, MutL-, and Helicase II-dependent Unwinding from the Single-strand Break of an Incised Heteroduplex. Journal of Biological Chemistry, 1998, 273, 9202-9207.	3.4	123
72	DNA-dependent Activation of the hMutSÎ± ATPase. Journal of Biological Chemistry, 1998, 273, 32049-32054.	3.4	59

#	Article	IF	Citations
73	MutS and MutL Activate DNA Helicase II in a Mismatch-dependent Manner. Journal of Biological Chemistry, 1998, 273, 9197-9201.	3.4	135
74	Nucleotide-promoted Release of hMutSÎ± from Heteroduplex DNA Is Consistent with an ATP-dependent Translocation Mechanism. Journal of Biological Chemistry, 1998, 273, 32055-32062.	3.4	164
75	A Naturally Occurring <i>hPMS2</i> Mutation Can Confer a Dominant Negative Mutator Phenotype. Molecular and Cellular Biology, 1998, 18, 1635-1641.	2.3	94
76	DNA Polymerase Î´ Is Required for Human Mismatch Repair in Vitro. Journal of Biological Chemistry, 1997, 272, 10917-10921.	3.4	186
77	Strand-specific Mismatch Repair in Mammalian Cells. Journal of Biological Chemistry, 1997, 272, 24727-24730.	3.4	213
78	Mapping Individual Cosmid DNAs by Direct AFM Imaging. Genomics, 1997, 41, 379-384.	2.9	46
79	Mismatch Repair in Replication Fidelity, Genetic Recombination, and Cancer Biology. Annual Review of Biochemistry, 1996, 65, 101-133.	11.1	1,442
80	MSH6, a Saccharomyces cerevisiae protein that binds to mismatches as a heterodimer with MSH2. Current Biology, 1996, 6, 484-486.	3.9	100
81	Cisplatin and Adriamycin Resistance Are Associated with MutLÎ± and Mismatch Repair Deficiency in an Ovarian Tumor Cell Line. Journal of Biological Chemistry, 1996, 271, 19645-19648.	3.4	251
82	Mismatch repair, genetic stability and tumour avoidance. , 1995, , 85-91.		0
83	Genomic mismatch scanning: a new approach to genetic linkage mapping. Nature Genetics, 1993, 4, 11-18.	21.4	134
84	Hypermutability and mismatch repair deficiency in RER+ tumor cells. Cell, 1993, 75, 1227-1236.	28.9	1,031
85	Mechanisms and Biological Effects of Mismatch Repair. Annual Review of Genetics, 1991, 25, 229-253.	7.6	917
86	Mechanisms of DNA-mismatch correction. Mutation Research DNA Repair, 1990, 236, 253-267.	3.7	77
87	Gap formation is associated with methyl-directed mismatch correction under conditions of restricted DNA synthesis. Genome, 1989, 31, 104-111.	2.0	28
88	Methyl-directed DNA mismatch repair in Escherichia coli. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1988, 198, 37-43.	1.0	26
89	Mismatch-containing oligonucleotide duplexes bound by theE.coli mutS-encoded protein. Nucleic Acids Research, 1988, 16, 7843-7853.	14.5	90
90	Investigation of the complexes of EcoRI endonuclease with decanucleotides containing canonical and modified recognition sequences using fluorescence and optical detection of magnetic resonance spectroscopy. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 1988, 949, 189-194.	2.4	6

#	Article	IF	Citations
91	Nucleotide sequence of a cDNA for a member of the human 90-kDa heat-shock protein family. Gene, 1987, 53, 235-245.	2.2	183
92	â€˜Interactiveâ€™ recognition inEcoRl restriction enzyme-DNA complex. Nucleic Acids Research, 1984, 12, 7285-7292.	14.5	41
93	EFFECTS OF HIGH LEVELS OF DNA ADENINE METHYLATION ON METHYL-DIRECTED MISMATCH REPAIR IN <i>ESCHERICHIA COLI</i>. Genetics, 1983, 104, 571-582.	2.9	314
94	Studies on Sequence Recognition By Type II Restriction and Modification Enzyme. Critical Reviews in Biochemistry, 1982, 13, 287-323.	7.5	112
95	Stereochemical course of nucleotidyl transfer catalyzed by bacteriophage T7 induced DNA polymerase. Biochemistry, 1982, 21, 2570-2572.	2.5	41
96	Preliminary X-ray diffraction studies of EcoRI restriction endonuclease-DNA complex. Journal of Molecular Biology, 1981, 145, 607-610.	4.2	23
97	[12] Purification and properties of EcoRI endonuclease. Methods in Enzymology, 1980, 65, 96-104.	1.0	22
98	Structures and mechanisms of DNA restriction and modification enzymes. Quarterly Reviews of Biophysics, 1979, 12, 315-369.	5.7	118
99	Substrate dependence of the mechanism of EcoRI endonuclease. Nucleic Acids Research, 1978, 5, 2991-2998.	14.5	69
100	DNA synthesis in strains of Escherichia coli K12 with temperature-sensitive DNA ligase and DNA polymerase I. Journal of Molecular Biology, 1974, 90, 115-126.	4.2	16
101	Genetic and enzymatic characterization of a conditional lethal mutant of Escherichia coli K12 with a temperature-sensitive DNA ligase. Journal of Molecular Biology, 1973, 77, 519-529.	4.2	142
102	Deoxyribonucleic Acid Ligase. Journal of Biological Chemistry, 1973, 248, 7495-7501.	3.4	108
103	Deoxyribonucleic Acid Ligase. Journal of Biological Chemistry, 1973, 248, 7502-7511.	3.4	72
104	Enzymatic Joining of Polynucleotides. Journal of Biological Chemistry, 1970, 245, 3626-3631.	3.4	146