Lawrence A Loeb

List of Publications by Year
in descending order

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217 papers	17,505 citations	13854 67 h-index	16636 123 g-index
223 all docs	223 docs citations	223 times ranked	16538 citing authors

#	Article	IF	Citations
1	Detection of ultra-rare mutations by next-generation sequencing. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14508-14513.	3.3	840
2	Multiple mutations and cancer. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 776-781.	3.3	657
3	The Werner syndrome protein is a DNA helicase. Nature Genetics, 1997, 17, 100-103.	9.4	594
4	Environmental and chemical carcinogenesis. Seminars in Cancer Biology, 2004, 14, 473-486.	4.3	522
5	Overexpression of Catalase Targeted to Mitochondria Attenuates Murine Cardiac Aging. Circulation, 2009, 119, 2789-2797.	1.6	414
6	Significance of multiple mutations in cancer. Carcinogenesis, 2000, 21, 379-385.	1.3	392
7	Enhancing the accuracy of next-generation sequencing for detecting rare and subclonal mutations. Nature Reviews Genetics, 2018, 19, 269-285.	7.7	374
8	DNA deletions and clonal mutations drive premature aging in mitochondrial mutator mice. Nature Genetics, 2008, 40, 392-394.	9.4	360
9	Detecting ultralow-frequency mutations by Duplex Sequencing. Nature Protocols, 2014, 9, 2586-2606.	5.5	360
10	Mitochondrial point mutations do not limit the natural lifespan of mice. Nature Genetics, 2007, 39, 540-543.	9.4	349
11	Human cancers express mutator phenotypes: origin, consequences and targeting. Nature Reviews Cancer, 2011, 11, 450-457.	12.8	342
12	Human cancers express a mutator phenotype. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 18238-18242.	3.3	331
13	Human Werner Syndrome DNA Helicase Unwinds Tetrahelical Structures of the Fragile X Syndrome Repeat Sequence d(CGG). Journal of Biological Chemistry, 1999, 274, 12797-12802.	1.6	330
14	Apurinic sites as mutagenic intermediates. Cell, 1985, 40, 483-484.	13.5	307
15	Ultra-Sensitive Sequencing Reveals an Age-Related Increase in Somatic Mitochondrial Mutations That Are Inconsistent with Oxidative Damage. PLoS Genetics, 2013, 9, e1003794.	1.5	289
16	Protein tolerance to random amino acid change. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9205-9210.	3.3	267
17	Advances in Chemical Carcinogenesis: A Historical Review and Prospective. Cancer Research, 2008, 68, 6863-6872.	0.4	258
18	DNA polymerases and human disease. Nature Reviews Genetics, 2008, 9, 594-604.	7.7	257

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19	ZINC in DNA polymerases. Biochemical and Biophysical Research Communications, 1971, 44, 37-43.	1.0	252
20	Werner Syndrome Protein. Journal of Biological Chemistry, 1998, 273, 34139-34144.	1.6	233
21	Mutational Heterogeneity in Human Cancers: Origin and Consequences. Annual Review of Pathology: Mechanisms of Disease, 2010, 5, 51-75.	9.6	210
22	Characterization of Werner syndrome protein DNA helicase activity: Directionality, substrate dependence and stimulation by replication protein A. Nucleic Acids Research, 1998, 26, 2879-2885.	6.5	208
23	Werner Syndrome Protein. Journal of Biological Chemistry, 1998, 273, 34145-34150.	1.6	204
24	Viral Error Catastrophe by Mutagenic Nucleosides. Annual Review of Microbiology, 2004, 58, 183-205.	2.9	198
25	Cancers Exhibit a Mutator Phenotype: Clinical Implications. Cancer Research, 2008, 68, 3551-3557.	0.4	198
26	The Mutation Rate and Cancer. Genetics, 1998, 148, 1483-1490.	1.2	197
27	The mitochondrial theory of aging and its relationship to reactive oxygen species damage and somatic mtDNA mutations. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18769-18770.	3.3	195
28	The influence of subclonal resistance mutations on targeted cancer therapy. Nature Reviews Clinical Oncology, 2016, 13, 335-347.	12.5	185
29	Interactions between the Werner Syndrome Helicase and DNA Polymerase Î´ Specifically Facilitate Copying of Tetraplex and Hairpin Structures of the d(CGG) Trinucleotide Repeat Sequence. Journal of Biological Chemistry, 2001, 276, 16439-16446.	1.6	183
30	Prokaryotic DNA polymerase I: evolution, structure, and â€œbase flippingâ€•mechanism for nucleotide selection. Journal of Molecular Biology, 2001, 308, 823-837.	2.0	182
31	Somatic mutations in aging, cancer and neurodegeneration. Mechanisms of Ageing and Development, 2012, 133, 118-126.	2.2	180
32	The Werner syndrome gene: the molecular basis of RecQ helicase-deficiency diseases. Trends in Genetics, 2000, 16, 213-220.	2.9	176
33	An in-frame deletion at the polymerase active site of POLD1 causes a multisystem disorder with lipodystrophy. Nature Genetics, 2013, 45, 947-950.	9.4	151
34	Targeted gene evolution in Escherichia coli using a highly error-prone DNA polymerase I. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9727-9732.	3.3	141
35	Ultra-deep sequencing detects ovarian cancer cells in peritoneal fluid and reveals somatic TP53 mutations in noncancerous tissues. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6005-6010.	3.3	135
36	Sequencing small genomic targets with high efficiency and extreme accuracy. Nature Methods, 2015, 12, 423-425.	9.0	128

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37	Genetic Constraints on Protein Evolution. Critical Reviews in Biochemistry and Molecular Biology, 2007, 42, 313-326.	2.3	121
38	ZINC REQUIREMENT FOR DNA REPLICATION IN STIMULATED HUMAN LYMPHOCYTES. Journal of Cell Biology, 1973, 58, 594-601.	2.3	120
39	Genetic instability in cancer: Theory and experiment. Seminars in Cancer Biology, 2005, 15, 423-435.	4.3	116
40	The Role of Metal Ions in the Mechanisms of DNA and RNA Polymerase. CRC Critical Reviews in Biochemistry, 1979, 6, 219-244.	2.0	108
41	The Processing of Holliday Junctions by BLM and WRN Helicases Is Regulated by p53. Journal of Biological Chemistry, 2002, 277, 31980-31987.	1.6	107
42	DNA polymerase delta in dna replication and genome maintenance. Environmental and Molecular Mutagenesis, 2012, 53, 666-682.	0.9	103
43	Unwinding the molecular basis of the Werner syndrome. Mechanisms of Ageing and Development, 2001, 122, 921-944.	2.2	100
44	Mutational spectra of aflatoxin B ₁ in vivo establish biomarkers of exposure for human hepatocellular carcinoma. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3101-E3109.	3.3	100
45	Mutation at the Polymerase Active Site of Mouse DNA Polymerase Î´ Increases Genomic Instability and Accelerates Tumorigenesis. Molecular and Cellular Biology, 2007, 27, 7669-7682.	1.1	98
46	A Single Highly Mutable Catalytic Site Amino Acid Is Critical for DNA Polymerase Fidelity. Journal of Biological Chemistry, 2001, 276, 5044-5051.	1.6	96
47	Deregulated DNA polymerase beta induces chromosome instability and tumorigenesis. Cancer Research, 2002, 62, 3511-4.	0.4	95
48	Multiple Amino Acid Substitutions Allow DNA Polymerases to Synthesize RNA. Journal of Biological Chemistry, 2000, 275, 40266-40272.	1.6	94
49	Quantification of random genomic mutations. Nature Methods, 2005, 2, 285-290.	9.0	90
50	Mutagenesis in vitro by DNA polymerase from an RNA tumour virus. Nature, 1979, 278, 857-859.	13.7	89
51	Efficiency of carcinogenesis with and without a mutator mutation. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14140-14145.	3.3	89
52	APOBEC3B mutagenesis in cancer. Nature Genetics, 2013, 45, 964-965.	9.4	89
53	High fidelity and lesion bypass capability of human DNA polymerase Î´. Biochimie, 2009, 91, 1163-1172.	1.3	88
54	Human Cancers Express a Mutator Phenotype: Hypothesis, Origin, and Consequences. Cancer Research, 2016, 76, 2057-2059.	0.4	84

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55	Delayed and reduced cell replication and diminishing levels of DNA polymerase-? in regenerating liver of aging mice. Journal of Cellular Physiology, 1984, 118, 225-232.	2.0	83
56	Effects of depurination on the fidelity of DNA synthesis. Journal of Molecular Biology, 1979, 128, 197-218.	2.0	82
57	AUSTRALIA ANTIGEN (A HEPATITIS-ASSOCIATED ANTIGEN). Journal of Experimental Medicine, 1970, 131, 1190-1199.	4.2	81
58	On the fidelity of transcription by Escherichia coli ribonucleic acid polymerase. Journal of Molecular Biology, 1975, 97, 577-591.	2.0	80
59	Improving enzymes for cancer gene therapy. Nature Biotechnology, 1999, 17, 143-147.	9.4	80
60	Optimization of DNA polymerase mutation rates during bacterial evolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1154-1159.	3.3	80
61	Getting a grip on how DNA polymerases function. , 2001, 8, 656-659.		78
62	Metal activation of DNA synthesis. Biochemical and Biophysical Research Communications, 1976, 70, 812-817.	1.0	77
63	Copying Natural RNAs with E. coli DNA Polymerase I. Nature: New Biology, 1973, 242, 66-69.	4.5	76
64	Incorporation of the Guanosine Triphosphate Analogs 8-Oxo-dGTP and 8-NH2-dGTP by Reverse Transcriptases and Mammalian DNA Polymerases. Journal of Biological Chemistry, 1997, 272, 5892-5898.	1.6	76
65	Perspective - Lethal Mutagenesis of HIV by Mutagenic Ribonucleoside Analogs. AIDS Research and Human Retroviruses, 2000, 16, 1-3.	0.5	72
66	Ultra-Sensitive TP53 Sequencing for Cancer Detection Reveals Progressive Clonal Selection in Normal Tissue over a Century of Human Lifespan. Cell Reports, 2019, 28, 132-144.e3.	2.9	72
67	DNA polymerase activity as an index of lymphocyte stimulation: studies in Down's syndrome. Journal of Clinical Investigation, 1970, 49, 161-169.	3.9	72
68	[7] Sea urchin nuclear DNA polymerasel. Methods in Enzymology, 1974, 29, 53-70.	0.4	71
69	Mutation of HIV-1 Genomes in a Clinical Population Treated with the Mutagenic Nucleoside KP1461. PLoS ONE, 2011, 6, e15135.	1.1	71
70	Cancer Genome Sequencingâ€"An Interim Analysis. Cancer Research, 2009, 69, 4948-4950.	0.4	70
71	Thermus aquaticus DNA Polymerase I Mutants with Altered Fidelity. Journal of Biological Chemistry, 2000, 275, 32728-32735.	1.6	69
72	Genetic Instability and the Mutator Phenotype. American Journal of Pathology, 1999, 154, 1621-1626.	1.9	68

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73	Mutator Phenotypes Caused by Substitution at a Conserved Motif A Residue in Eukaryotic DNA Polymerase Î´. Journal of Biological Chemistry, 2006, 281, 4486-4494.	1.6	68
74	Lethal Mutagenesis: Targeting the Mutator Phenotype in Cancer. Seminars in Cancer Biology, 2010, 20, 353-359.	4.3	68
75	Low Fidelity Mutants in the O-Helix of Thermus aquaticus DNA Polymerase I. Journal of Biological Chemistry, 1997, 272, 11228-11235.	1.6	66
76	Mutagenesis in vitro by depurination of Î¦X174 DNA. Nature, 1981, 291, 349-351.	13.7	64
77	The Werner Syndrome Protein Binds Replication Fork and Holliday Junction DNAs as an Oligomer. Journal of Biological Chemistry, 2008, 283, 24478-24483.	1.6	64
78	Do mutator mutations fuel tumorigenesis?. Cancer and Metastasis Reviews, 2013, 32, 353-361.	2.7	64
79	Rapid changes in deoxynucleoside triphosphate pools in mammalian cells treated with mutagens. Biochemical and Biophysical Research Communications, 1983, 114, 458-464.	1.0	63
80	Destabilization of tetraplex structures of the fragile X repeat sequence (CGG)n is mediated by homolog-conserved domains in three members of the hnRNP family. Nucleic Acids Research, 2004, 32, 4145-4154.	6.5	63
81	Oxygen radical induced mutagenesis is DNA polymerase specific. Journal of Molecular Biology, 1994, 235, 33-41.	2.0	61
82	The N-terminal domain of the large subunit of human replication protein A binds to Werner syndrome protein and stimulates helicase activity. Mechanisms of Ageing and Development, 2003, 124, 921-930.	2.2	60
83	Incorporation of reporter-labeled nucleotides by DNA polymerases. BioTechniques, 2005, 38, 257-264.	0.8	59
84	Implications of genetic heterogeneity in cancer. Annals of the New York Academy of Sciences, 2012, 1267, 110-116.	1.8	59
85	Clonal expansions in ulcerative colitis identify patients with neoplasia. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20871-20876.	3.3	58
86	Errors in DNA synthesis: A source of spontaneous mutations. Mutation Research - Reviews in Genetic Toxicology, 1990, 238, 297-304.	3.0	56
87	Multi-stage proofreading in DNA replication. Quarterly Reviews of Biophysics, 1993, 26, 225-331.	2.4	55
88	Human Immunodeficiency Virus Reverse Transcriptase. Journal of Biological Chemistry, 1996, 271, 4872-4878.	1.6	55
89	Lethal mutagenesis of HIV. Virus Research, 2005, 107, 215-228.	1.1	55
90	Werner syndrome protein interacts functionally with translesion DNA polymerases. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10394-10399.	3.3	54

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91	Mutagenicity and pausing of HIV reverse transcriptase during HIV plus-strand DNA synthesis. Nucleic Acids Research, 1994, 22, 47-52.	6.5	50
92	Frameshift Mutagenesis and Microsatellite Instability Induced by Human Alkyladenine DNA Glycosylase. Molecular Cell, 2010, 37, 843-853.	4.5	50
93	Zinc in reverse transcriptase. Biochemical and Biophysical Research Communications, 1974, 56, 959-964.	1.0	49
94	6. Eucaryotic DNA Polymerases. The Enzymes, 1974, 10, 173-209.	0.7	49
95	The Enzymatic Activities of the Werner Syndrome Protein Are Disabled by the Amino Acid Polymorphism R834C. Journal of Biological Chemistry, 2004, 279, 55499-55505.	1.6	49
96	Depurination decreases fidelity of DNA synthesis in vitro. Nature, 1977, 270, 537-538.	13.7	47
97	Generation of mutator mutants during carcinogenesis. DNA Repair, 2006, 5, 294-302.	1.3	47
98	The Conserved Active Site Motif A of Escherichia coliDNA Polymerase I Is Highly Mutable. Journal of Biological Chemistry, 2001, 276, 18836-18842.	1.6	46
99	When Pol I Goes into High Gear: Processive DNA Synthesis by Pol I in the Cell. Cell Cycle, 2004, 3, 114-116.	1.3	46
100	Fidelity of Mutant HIV-1 Reverse Transcriptases:Â Interaction with the Single-Stranded Template Influences the Accuracy of DNA Synthesisâ€. Biochemistry, 1998, 37, 5831-5839.	1.2	45
101	Insertion of the T3 DNA polymerase thioredoxin binding domain enhances the processivity and fidelity of Taq DNA polymerase. Nucleic Acids Research, 2003, 31, 4702-4709.	6.5	45
102	The Werner syndrome protein confers resistance to the DNA lesions N3-methyladenine and O6-methylguanine: implications for WRN function. DNA Repair, 2004, 3, 629-638.	1.3	44
103	Negative Clonal Selection in Tumor Evolution. Genetics, 2005, 171, 2123-2131.	1.2	44
104	Highly Tolerated Amino Acid Substitutions Increase the Fidelity of Escherichia coli DNA Polymerase I. Journal of Biological Chemistry, 2007, 282, 12201-12209.	1.6	44
105	Extensive subclonal mutational diversity in human colorectal cancer and its significance. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26863-26872.	3.3	44
106	Manganese as a mutagenic agent during in vitro DNA synthesis. Biochemical and Biophysical Research Communications, 1975, 67, 1041-1046.	1.0	43
107	The Mutator Phenotype in Cancer: Molecular Mechanisms and Targeting Strategies. Current Drug Targets, 2010, 11, 1296-1303.	1.0	43
108	Mutability of DNA polymerase I: Implications for the creation of mutant DNA polymerases. DNA Repair, 2005, 4, 1390-1398.	1.3	42

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109	The Werner Syndrome Protein Is Distinguished from the Bloom Syndrome Protein by Its Capacity to Tightly Bind Diverse DNA Structures. PLoS ONE, 2012, 7, e30189.	1.1	42
110	Distribution of Mutations in Human Thymidylate Synthase Yielding Resistance to 5-Fluorodeoxyuridine. Journal of Biological Chemistry, 2002, 277, 36304-36311.	1.6	41
111	Detection of Ultra-Rare Mitochondrial Mutations in Breast Stem Cells by Duplex Sequencing. PLoS ONE, 2015, 10, e0136216.	1.1	41
112	The Werner Syndrome Exonuclease Facilitates DNA Degradation and High Fidelity DNA Polymerization by Human DNA Polymerase Î*. Journal of Biological Chemistry, 2012, 287, 12480-12490.	1.6	40
113	Altered RECQ Helicase Expression in Sporadic Primary Colorectal Cancers. Translational Oncology, 2013, 6, 458-IN10.	1.7	40
114	RNA-dependent DNA polymerase: Presence in normal human cells. Biochemical and Biophysical Research Communications, 1971, 42, 1228-1234.	1.0	39
115	Site-specific mutagenesis by error-directed DNA synthesis. Nature, 1982, 295, 708-710.	13.7	39
116	DNA damage and repair in brain: relationship to aging. Mutation Research - DNAging, 1992, 275, 317-329.	3.3	39
117	Why Cockayne syndrome patients do not get cancer despite their DNA repair deficiency. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10151-10156.	3.3	39
118	Animal cell DNA polymerases in DNA repair. Mutation Research DNA Repair, 1990, 236, 289-300.	3.8	38
119	Erroneous base-pairing induced by a chemical carcinogen during DNA synthesis. Nature, 1974, 252, 414-416.	13.7	36
120	On the activity and fidelity of chromatin-associated hepatic DNA polymerase-? in aging murine species of different life spans. Journal of Cellular Physiology, 1981, 106, 435-444.	2.0	36
121	Creating novel enzymes by applied molecular evolution. Chemistry and Biology, 1997, 4, 889-898.	6.2	36
122	In Vivo Mutagenesis by Escherichia coliDNA Polymerase I. Journal of Biological Chemistry, 2001, 276, 46759-46764.	1.6	36
123	One cell at a time. Nature, 2014, 512, 143-144.	13.7	34
124	Structure of Drosophila melanogaster dAT replicated in an in vitro system. Biochemical and Biophysical Research Communications, 1970, 40, 1266-1272.	1.0	33
125	Random Sequence Mutagenesis and Resistance to 5-Fluorouridine in Human Thymidylate Synthases. Journal of Biological Chemistry, 1998, 273, 25809-25817.	1.6	33
126	RNA-dependent DNA Polymerase in Human Lymphocytes during Gene Activation by Phytohaemagglutinin. Nature: New Biology, 1971, 232, 58-61.	4.5	32

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127	Dna replication in human lymphocytes during aging. Journal of Cellular Physiology, 1978, 96, 235-243.	2.0	32
128	Mutator phenotype in cancer: Origin and consequences. Seminars in Cancer Biology, 2010, 20, 279-280.	4.3	32
129	Mutations in the R2 Subunit of Ribonucleotide Reductase That Confer Resistance to Hydroxyurea. Journal of Biological Chemistry, 2004, 279, 40723-40728.	1.6	31
130	A Mitochondrial view of aging, reactive oxygen species and metastatic cancer. Aging Cell, 2010, 9, 462-465.	3.0	31
131	Infidelity of DNA synthesis by reverse transcriptase. Biochemical and Biophysical Research Communications, 1973, 52, 401-406.	1.0	28
132	DNA Polymerase-Î±: Enzymology, Function, Fidelity, and Mutagenesis. Progress in Molecular Biology and Translational Science, 1986, 33, 57-110.	1.9	28
133	Mice and mitochondria. Nature, 2004, 429, 357-359.	13.7	28
134	Tolerance of different proteins for amino acid diversity. Molecular Diversity, 1996, 2, 111-118.	2.1	27
135	Human Ku Antigen Tightly Binds and Stabilizes a Tetrahelical Form of the Fragile X Syndrome d(CGG) Expanded Sequence. Journal of Biological Chemistry, 2000, 275, 33134-33141.	1.6	26
136	Mitochondrial DNA integrity is not dependent on DNA polymerase-Î² activity. DNA Repair, 2006, 5, 71-79.	1.3	26
137	Stimulation of Ammo-acid Incorporation by Nuclear Ribonucleic Acid from Normal and Methylcholanthrene-treated Rats. Nature, 1963, 199, 809-810.	13.7	25
138	Roles of DNA polymerase I in leading and lagging-strand replication defined by a high-resolution mutation footprint of ColE1 plasmid replication. Nucleic Acids Research, 2011, 39, 7020-7033.	6.5	25
139	Accurate RNA consensus sequencing for high-fidelity detection of transcriptional mutagenesis-induced epimutations. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9415-9420.	3.3	25
140	A Rapid Assay for Measuring Nucleotide Excision Repair by Oligonucleotide Retrieval. Scientific Reports, 2014, 4, 4894.	1.6	24
141	Single-Molecule Sequencing Reveals Patterns of Preexisting Drug Resistance That Suggest Treatment Strategies in Philadelphia-Positive Leukemias. Clinical Cancer Research, 2018, 24, 5321-5334.	3.2	24
142	Fidelity of DNA Polymerase-? in Neurons from Young and Very Aged Mice. Journal of Neurochemistry, 1985, 45, 1273-1278.	2.1	23
143	DNA polymerase Î± and models for proofreading. Nucleic Acids Research, 1985, 13, 261-274.	6.5	23
144	Clonal Expansions and Short Telomeres Are Associated with Neoplasia in Early-onset, but not Late-onset, Ulcerative Colitis. Inflammatory Bowel Diseases, 2013, 19, 2593-2602.	0.9	23

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145	Redesigning the Substrate Specificity of HumanO6-Alkylguanine-DNA Alkyltransferase. Mutants with Enhanced Repair ofO4-Methylthymineâ€. Biochemistry, 1999, 38, 12097-12103.	1.2	22
146	Infidelity of DNA synthesis: A general property of RNA tumor viruses. Biochemical and Biophysical Research Communications, 1974, 61, 410-414.	1.0	21
147	The three faces of the WS helicase. Nature Genetics, 1998, 19, 308-309.	9.4	21
148	Sequence specificity of pausing by DNA polymerases. Biochemical and Biophysical Research Communications, 1989, 164, 1149-1156.	1.0	20
149	Herpes thymidine kinase mutants with altered catalytic efficiencies obtained by random sequence selection. Protein Engineering, Design and Selection, 1994, 7, 83-89.	1.0	20
150	On the fidelity of DNA replication: herpes DNA potymerase and its associated exonuclease. Nucleic Acids Research, 1987, 15, 1185-1198.	6.5	19
151	Structure?Function Relationships in Escherichia coli Promoter DNA. Progress in Molecular Biology and Translational Science, 1990, 38, 137-164.	1.9	19
152	Inefficient Repair of RNA . DNA Hybrids. FEBS Journal, 1997, 250, 492-501.	0.2	19
153	Human O6 -alkylguanine-DNA alkyltransferase: protection against alkylating agents and sensitization to dibromoalkanes. Carcinogenesis, 1999, 20, 2089-2094.	1.3	19
154	Decreased Mitochondrial Mutagenesis during Transformation of Human Breast Stem Cells into Tumorigenic Cells. Cancer Research, 2016, 76, 4569-4578.	0.4	19
155	On Mitochondria, Mutations, and Methodology. Cell Metabolism, 2009, 10, 437.	7.2	18
156	Active Site Mutations in Mammalian DNA Polymerase Î˝ Alter Accuracy and Replication Fork Progression. Journal of Biological Chemistry, 2010, 285, 32264-32272.	1.6	18
157	UV irradiation alters deoxynucleoside triphosphate pools in Escherichia coli. Mutation Research - DNA Repair Reports, 1984, 131, 97-100.	1.9	17
158	A high-resolution landscape of mutations in the BCL6 super-enhancer in normal human B cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24779-24785.	3.3	17
159	Amino Acid Substitutions at Conserved Tyrosine 52 Alter Fidelity and Bypass Efficiency of Human DNA Polymerase Î·. Journal of Biological Chemistry, 2003, 278, 19341-19346.	1.6	16
160	Evolutionary dynamics and significance of multiple subclonal mutations in cancer. DNA Repair, 2017, 56, 7-15.	1.3	16
161	Tumbling down a different pathway to genetic instability. Journal of Clinical Investigation, 2003, 112, 1793-1795.	3.9	16
162	Selection of new biologically active molecules from random nucleotide sequences. Gene, 1993, 137, 41-47.	1.0	15

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163	Mitochondrial mutagenesis induced by tumor-specific radiation bystander effects. Journal of Molecular Medicine, 2010, 88, 701-708.	1.7	15
164	The Biochemistry and Fidelity of Synthesis by the Apicoplast Genome Replication DNA Polymerase Pfprex from the Malaria Parasite Plasmodium falciparum. Journal of Molecular Biology, 2011, 410, 27-38.	2.0	15
165	A random mutation capture assay to detect genomic point mutations in mouse tissue. Nucleic Acids Research, 2011, 39, e73-e73.	6.5	15
166	A Substitution in the Fingers Domain of DNA Polymerase Î´ Reduces Fidelity by Altering Nucleotide Discrimination in the Catalytic Site*. Journal of Biological Chemistry, 2013, 288, 5572-5580.	1.6	15
167	Site specific mutagenesis: insertion of single noncomplementary nucleotides at specified sites by error-directed DNA polymerization. Nucleic Acids Research, 1984, 12, 6615-6628.	6.5	14
168	Methylation of transfer RNA during transformation of human lymphocytes by phytohemagglutinin. Biochemical and Biophysical Research Communications, 1973, 50, 172-178.	1.0	13
169	Template recognition and chain elongation in DNA synthesis in vitro. Journal of Molecular Biology, 1976, 106, 605-621.	2.0	13
170	Mutations in the Î±8 Loop of Human APE1 Alter Binding and Cleavage of DNA Containing an Abasic Site. Journal of Biological Chemistry, 2003, 278, 46994-47001.	1.6	13
171	Exploring the implications of distinct mutational signatures and mutation rates in aging and cancer. Genome Medicine, 2016, 8, 30.	3.6	13
172	Rare Mutations in Cancer Drug Resistance and Implications for Therapy. Clinical Pharmacology and Therapeutics, 2020, 108, 437-439.	2.3	13
173	MULTIPLE DNA POLYMERASES. DISPLAYED BY ISOELECTRIC FOCUSING. Annals of the New York Academy of Sciences, 1973, 209, 354-362.	1.8	12
174	The association of thymidine kinase activity and thymidine transport in Escherichia coli. Gene, 1991, 99, 25-29.	1.0	12
175	Homozygosity for the WRN Helicase-Inactivating Variant, R834C, does not confer a Werner syndrome clinical phenotype. Scientific Reports, 2017, 7, 44081.	1.6	12
176	In Vitro Production and Screening of DNA Polymerase Î· Mutants for Catalytic Diversity. BioTechniques, 2002, 33, 1136-1144.	0.8	11
177	In vitro DNA synthesis in the presence of antibody to homogeneous E. Coli DNA polymerase. Biochemical and Biophysical Research Communications, 1971, 42, 147-153.	1.0	10
178	Reply: Is there any genetic instability in human cancer?. DNA Repair, 2010, 9, 859-860.	1.3	10
179	Mutations in DNA polymerase Î· are not detected in squamous cell carcinoma of the skin. International Journal of Cancer, 2006, 119, 2225-2227.	2.3	9
180	Differential competitive resistance to methylating versus chloroethylating agents among five O6-alkylguanine DNA alkyltransferases in human hematopoietic cells. Molecular Cancer Therapeutics, 2006, 5, 121-128.	1.9	9

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181	LOH-proficient embryonic stem cells: a model of cancer progenitor cells?. Trends in Genetics, 2007, 23, 154-157.	2.9	9
182	Sphingosine, a Modulator of Human Translesion DNA Polymerase Activity. Journal of Biological Chemistry, 2014, 289, 21663-21672.	1.6	9
183	Initiation of DNA synthesis in eucaryotes: A model in vitro system. Biochemical and Biophysical Research Communications, 1970, 41, 589-593.	1.0	8
184	Origin of Multiple Mutations in Human Cancers. Drug Metabolism Reviews, 1998, 30, 285-304.	1.5	8
185	Enhanced in vivo repair of O4 -methylthymine by a mutant human DNA alkyltransferase. Carcinogenesis, 2000, 21, 1397-1402.	1.3	8
186	Molecular Biology and Malignancy: Series Introduction Mechanisms of Neoplastic Transformation. Cancer Investigation, 1983, 1, 175-183.	0.6	7
187	Evidence against DNA polymerase ? as a candidate gene for Werner syndrome. Human Genetics, 1994, 93, 507-12.	1.8	7
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