

# Lawrence A Loeb

## List of Publications by Citations

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207  
papers

14,567  
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62  
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ext. papers

16,071  
ext. citations

11.1  
avg, IF

6.69  
L-index

#	Paper	IF	Citations
207	Detection of ultra-rare mutations by next-generation sequencing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14508-13	11.5	627
206	Multiple mutations and cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 776-81	11.5	557
205	The Werner syndrome protein is a DNA helicase. <i>Nature Genetics</i> , <b>1997</b> , 17, 100-3	36.3	535
204	Environmental and chemical carcinogenesis. <i>Seminars in Cancer Biology</i> , <b>2004</b> , 14, 473-86	12.7	421
203	Overexpression of catalase targeted to mitochondria attenuates murine cardiac aging. <i>Circulation</i> , <b>2009</b> , 119, 2789-97	16.7	347
202	DNA deletions and clonal mutations drive premature aging in mitochondrial mutator mice. <i>Nature Genetics</i> , <b>2008</b> , 40, 392-4	36.3	314
201	Significance of multiple mutations in cancer. <i>Carcinogenesis</i> , <b>2000</b> , 21, 379-85	4.6	314
200	Mitochondrial point mutations do not limit the natural lifespan of mice. <i>Nature Genetics</i> , <b>2007</b> , 39, 540-3	36.3	310
199	Human cancers express a mutator phenotype. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 18238-42	11.5	292
198	Human cancers express mutator phenotypes: origin, consequences and targeting. <i>Nature Reviews Cancer</i> , <b>2011</b> , 11, 450-7	31.3	291
197	Human werner syndrome DNA helicase unwinds tetrahelical structures of the fragile X syndrome repeat sequence d(CGG) <sub>n</sub> . <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 12797-802	5.4	285
196	Apurinic sites as mutagenic intermediates. <i>Cell</i> , <b>1985</b> , 40, 483-4	56.2	282
195	Detecting ultralow-frequency mutations by Duplex Sequencing. <i>Nature Protocols</i> , <b>2014</b> , 9, 2586-606	18.8	247
194	Enhancing the accuracy of next-generation sequencing for detecting rare and subclonal mutations. <i>Nature Reviews Genetics</i> , <b>2018</b> , 19, 269-285	30.1	235
193	Ultra-sensitive sequencing reveals an age-related increase in somatic mitochondrial mutations that are inconsistent with oxidative damage. <i>PLoS Genetics</i> , <b>2013</b> , 9, e1003794	6	223
192	DNA polymerases and human disease. <i>Nature Reviews Genetics</i> , <b>2008</b> , 9, 594-604	30.1	219
191	Protein tolerance to random amino acid change. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 9205-10	11.5	218

190	Zinc in DNA polymerases. <i>Biochemical and Biophysical Research Communications</i> , <b>1971</b> , 44, 37-43	3.4	216
189	Advances in chemical carcinogenesis: a historical review and prospective. <i>Cancer Research</i> , <b>2008</b> , 68, 6863-72	6.7	215
188	Werner syndrome protein. I. DNA helicase and dna exonuclease reside on the same polypeptide. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 34139-44	5.4	198
187	Characterization of Werner syndrome protein DNA helicase activity: directionality, substrate dependence and stimulation by replication protein A. <i>Nucleic Acids Research</i> , <b>1998</b> , 26, 2879-85	20.1	190
186	Viral error catastrophe by mutagenic nucleosides. <i>Annual Review of Microbiology</i> , <b>2004</b> , 58, 183-205	17.5	178
185	Werner syndrome protein. II. Characterization of the integral 3Q-> 5Q DNA exonuclease. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 34145-50	5.4	176
184	Cancers exhibit a mutator phenotype: clinical implications. <i>Cancer Research</i> , <b>2008</b> , 68, 3551-7; discussion 3557	10.1	175
183	The mitochondrial theory of aging and its relationship to reactive oxygen species damage and somatic mtDNA mutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 18769-70	11.5	173
182	Mutational heterogeneity in human cancers: origin and consequences. <i>Annual Review of Pathology: Mechanisms of Disease</i> , <b>2010</b> , 5, 51-75	34	172
181	The mutation rate and cancer. <i>Genetics</i> , <b>1998</b> , 148, 1483-90	4	164
180	Prokaryotic DNA polymerase I: evolution, structure, and "base flipping" mechanism for nucleotide selection. <i>Journal of Molecular Biology</i> , <b>2001</b> , 308, 823-37	6.5	159
179	Interactions between the Werner syndrome helicase and DNA polymerase delta specifically facilitate copying of tetraplex and hairpin structures of the d(CGG) <sub>n</sub> trinucleotide repeat sequence. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 16439-46	5.4	153
178	The Werner syndrome gene: the molecular basis of RecQ helicase-deficiency diseases. <i>Trends in Genetics</i> , <b>2000</b> , 16, 213-20	8.5	153
177	The influence of subclonal resistance mutations on targeted cancer therapy. <i>Nature Reviews Clinical Oncology</i> , <b>2016</b> , 13, 335-47	19.4	139
176	Somatic mutations in aging, cancer and neurodegeneration. <i>Mechanisms of Ageing and Development</i> , <b>2012</b> , 133, 118-26	5.6	135
175	An in-frame deletion at the polymerase active site of POLD1 causes a multisystem disorder with lipodystrophy. <i>Nature Genetics</i> , <b>2013</b> , 45, 947-50	36.3	120
174	Targeted gene evolution in Escherichia coli using a highly error-prone DNA polymerase I. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 9727-32	11.5	116
173	Zinc requirement for DNA replication in stimulated human lymphocytes. <i>Journal of Cell Biology</i> , <b>1973</b> , 58, 594-601	7.3	107

172	Ultra-deep sequencing detects ovarian cancer cells in peritoneal fluid and reveals somatic TP53 mutations in noncancerous tissues. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 6005-10	11.5	104
171	Genetic instability in cancer: theory and experiment. <i>Seminars in Cancer Biology</i> , <b>2005</b> , 15, 423-35	12.7	100
170	Sequencing small genomic targets with high efficiency and extreme accuracy. <i>Nature Methods</i> , <b>2015</b> , 12, 423-5	21.6	95
169	The role of metal ions in the mechanisms of DNA and RNA polymerases. <i>CRC Critical Reviews in Biochemistry</i> , <b>1979</b> , 6, 219-44		94
168	Genetic constraints on protein evolution. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2007</b> , 42, 313-26	8.7	93
167	The processing of Holliday junctions by BLM and WRN helicases is regulated by p53. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 31980-7	5.4	91
166	A single highly mutable catalytic site amino acid is critical for DNA polymerase fidelity. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 5044-51	5.4	88
165	Unwinding the molecular basis of the Werner syndrome. <i>Mechanisms of Ageing and Development</i> , <b>2001</b> , 122, 921-44	5.6	85
164	Deregulated DNA polymerase beta induces chromosome instability and tumorigenesis. <i>Cancer Research</i> , <b>2002</b> , 62, 3511-4	10.1	85
163	Mutation at the polymerase active site of mouse DNA polymerase delta increases genomic instability and accelerates tumorigenesis. <i>Molecular and Cellular Biology</i> , <b>2007</b> , 27, 7669-82	4.8	84
162	Multiple amino acid substitutions allow DNA polymerases to synthesize RNA. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 40266-72	5.4	80
161	Quantification of random genomic mutations. <i>Nature Methods</i> , <b>2005</b> , 2, 285-90	21.6	79
160	DNA polymerase delta in DNA replication and genome maintenance. <i>Environmental and Molecular Mutagenesis</i> , <b>2012</b> , 53, 666-82	3.2	78
159	High fidelity and lesion bypass capability of human DNA polymerase delta. <i>Biochimie</i> , <b>2009</b> , 91, 1163-72	4.6	76
158	Mutagenesis in vitro by DNA polymerase from an RNA tumour virus. <i>Nature</i> , <b>1979</b> , 278, 857-9	50.4	76
157	Efficiency of carcinogenesis with and without a mutator mutation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 14140-5	11.5	75
156	Delayed and reduced cell replication and diminishing levels of DNA polymerase-alpha in regenerating liver of aging mice. <i>Journal of Cellular Physiology</i> , <b>1984</b> , 118, 225-32	7	75
155	Effects of depurination on the fidelity of DNA synthesis. <i>Journal of Molecular Biology</i> , <b>1979</b> , 128, 197-218	16.5	73

154	On the fidelity of transcription by Escherichia coli ribonucleic acid polymerase. <i>Journal of Molecular Biology</i> , <b>1975</b> , 97, 577-91	6.5	71
153	Mutation of HIV-1 genomes in a clinical population treated with the mutagenic nucleoside KP1461. <i>PLoS ONE</i> , <b>2011</b> , 6, e15135	3.7	70
152	Incorporation of the guanosine triphosphate analogs 8-oxo-dGTP and 8-NH2-dGTP by reverse transcriptases and mammalian DNA polymerases. <i>Journal of Biological Chemistry</i> , <b>1997</b> , 272, 5892-8	5.4	70
151	Lethal mutagenesis of HIV by mutagenic ribonucleoside analogs. <i>AIDS Research and Human Retroviruses</i> , <b>2000</b> , 16, 1-3	1.6	69
150	Metal activation of DNA synthesis. <i>Biochemical and Biophysical Research Communications</i> , <b>1976</b> , 70, 812-3	3.4	69
149	Australia antigen (a hepatitis-associated antigen): purification and physical properties. <i>Journal of Experimental Medicine</i> , <b>1970</b> , 131, 1190-9	16.6	67
148	DNA polymerase activity as an index of lymphocyte stimulation: studies in Down's syndrome. <i>Journal of Clinical Investigation</i> , <b>1970</b> , 49, 161-9	15.9	65
147	Optimization of DNA polymerase mutation rates during bacterial evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 1154-9	11.5	64
146	Copying natural RNAs with E. coli DNA polymerase I. <i>Nature: New Biology</i> , <b>1973</b> , 242, 66-9		62
145	Lethal mutagenesis: targeting the mutator phenotype in cancer. <i>Seminars in Cancer Biology</i> , <b>2010</b> , 20, 353-9	12.7	61
144	Mutator phenotypes caused by substitution at a conserved motif A residue in eukaryotic DNA polymerase delta. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 4486-94	5.4	61
143	Improving enzymes for cancer gene therapy. <i>Nature Biotechnology</i> , <b>1999</b> , 17, 143-7	44.5	61
142	Oxygen radical induced mutagenesis is DNA polymerase specific. <i>Journal of Molecular Biology</i> , <b>1994</b> , 235, 33-41	6.5	61
141	Human Cancers Express a Mutator Phenotype: Hypothesis, Origin, and Consequences. <i>Cancer Research</i> , <b>2016</b> , 76, 2057-9	10.1	61
140	Cancer genome sequencing—an interim analysis. <i>Cancer Research</i> , <b>2009</b> , 69, 4948-50	10.1	60
139	Low fidelity mutants in the O-helix of Thermus aquaticus DNA polymerase I. <i>Journal of Biological Chemistry</i> , <b>1997</b> , 272, 11228-35	5.4	60
138	Sea urchin nuclear DNA polymerase. <i>Methods in Enzymology</i> , <b>1974</b> , 29, 53-70	1.7	59
137	Mutational spectra of aflatoxin B in vivo establish biomarkers of exposure for human hepatocellular carcinoma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E3101-E3109	11.5	58

136	Mutagenesis in vitro by depurination of phiX174 dna. <i>Nature</i> , <b>1981</b> , 291, 349-51	50.4	58
135	The Werner syndrome protein binds replication fork and holliday junction DNAs as an oligomer. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 24478-83	5.4	57
134	<i>Thermus aquaticus</i> DNA polymerase I mutants with altered fidelity. Interacting mutations in the O-helix. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 32728-35	5.4	57
133	Rapid changes in deoxynucleoside triphosphate pools in mammalian cells treated with mutagens. <i>Biochemical and Biophysical Research Communications</i> , <b>1983</b> , 114, 458-64	3.4	57
132	Genetic instability and the mutator phenotype. Studies in ulcerative colitis. <i>American Journal of Pathology</i> , <b>1999</b> , 154, 1621-6	5.8	56
131	Clonal expansions in ulcerative colitis identify patients with neoplasia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 20871-6	11.5	53
130	Destabilization of tetraplex structures of the fragile X repeat sequence (CGG) <sub>n</sub> is mediated by homolog-conserved domains in three members of the hnRNP family. <i>Nucleic Acids Research</i> , <b>2004</b> , 32, 4145-54	20.1	53
129	Lethal mutagenesis of HIV. <i>Virus Research</i> , <b>2005</b> , 107, 215-28	6.4	50
128	The N-terminal domain of the large subunit of human replication protein A binds to Werner syndrome protein and stimulates helicase activity. <i>Mechanisms of Ageing and Development</i> , <b>2003</b> , 124, 921-30	5.6	49
127	Implications of genetic heterogeneity in cancer. <i>Annals of the New York Academy of Sciences</i> , <b>2012</b> , 1267, 110-6	6.5	48
126	Werner syndrome protein interacts functionally with translesion DNA polymerases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 10394-9	11.5	48
125	Incorporation of reporter-labeled nucleotides by DNA polymerases. <i>BioTechniques</i> , <b>2005</b> , 38, 257-64	2.5	48
124	Errors in DNA synthesis: a source of spontaneous mutations. <i>Mutation Research - Reviews in Genetic Toxicology</i> , <b>1990</b> , 238, 297-304		48
123	Multi-stage proofreading in DNA replication. <i>Quarterly Reviews of Biophysics</i> , <b>1993</b> , 26, 225-331	7	46
122	Ultra-Sensitive TP53 Sequencing for Cancer Detection Reveals Progressive Clonal Selection in Normal Tissue over a Century of Human Lifespan. <i>Cell Reports</i> , <b>2019</b> , 28, 132-144.e3	10.6	45
121	Zinc in reverse transcriptase. <i>Biochemical and Biophysical Research Communications</i> , <b>1974</b> , 56, 959-64	3.4	45
120	Do mutator mutations fuel tumorigenesis?. <i>Cancer and Metastasis Reviews</i> , <b>2013</b> , 32, 353-61	9.6	44
119	Fidelity of mutant HIV-1 reverse transcriptases: interaction with the single-stranded template influences the accuracy of DNA synthesis. <i>Biochemistry</i> , <b>1998</b> , 37, 5831-9	3.2	44

118	Depurination decreases fidelity of DNA synthesis in vitro. <i>Nature</i> , <b>1977</b> , 270, 537-8	50.4	44
117	Human immunodeficiency virus reverse transcriptase. Functional mutants obtained by random mutagenesis coupled with genetic selection in <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 4872-8	5.4	43
116	Mutagenicity and pausing of HIV reverse transcriptase during HIV plus-strand DNA synthesis. <i>Nucleic Acids Research</i> , <b>1994</b> , 22, 47-52	20.1	42
115	Generation of mutator mutants during carcinogenesis. <i>DNA Repair</i> , <b>2006</b> , 5, 294-302	4.3	41
114	Manganese as a mutagenic agent during in vitro DNA synthesis. <i>Biochemical and Biophysical Research Communications</i> , <b>1975</b> , 67, 1041-6	3.4	41
113	The enzymatic activities of the Werner syndrome protein are disabled by the amino acid polymorphism R834C. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 55499-505	5.4	40
112	The Werner syndrome protein confers resistance to the DNA lesions N3-methyladenine and O6-methylguanine: implications for WRN function. <i>DNA Repair</i> , <b>2004</b> , 3, 629-38	4.3	40
111	The conserved active site motif A of <i>Escherichia coli</i> DNA polymerase I is highly mutable. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 18836-42	5.4	40
110	Frameshift mutagenesis and microsatellite instability induced by human alkyladenine DNA glycosylase. <i>Molecular Cell</i> , <b>2010</b> , 37, 843-53	17.6	39
109	Highly tolerated amino acid substitutions increase the fidelity of <i>Escherichia coli</i> DNA polymerase I. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 12201-9	5.4	39
108	Insertion of the T3 DNA polymerase thioredoxin binding domain enhances the processivity and fidelity of Taq DNA polymerase. <i>Nucleic Acids Research</i> , <b>2003</b> , 31, 4702-9	20.1	39
107	DNA damage and repair in brain: relationship to aging. <i>Mutation Research - DNAAging</i> , <b>1992</b> , 275, 317-29		38
106	Distribution of mutations in human thymidylate synthase yielding resistance to 5-fluorodeoxyuridine. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 36304-11	5.4	37
105	Site-specific mutagenesis by error-directed DNA synthesis. <i>Nature</i> , <b>1982</b> , 295, 708-10	50.4	37
104	Mutability of DNA polymerase I: implications for the creation of mutant DNA polymerases. <i>DNA Repair</i> , <b>2005</b> , 4, 1390-8	4.3	36
103	Negative clonal selection in tumor evolution. <i>Genetics</i> , <b>2005</b> , 171, 2123-31	4	36
102	On the activity and fidelity of chromatin-associated hepatic DNA polymerase-beta in aging murine species of different life spans. <i>Journal of Cellular Physiology</i> , <b>1981</b> , 106, 435-44	7	36
101	The Werner syndrome exonuclease facilitates DNA degradation and high fidelity DNA polymerization by human DNA polymerase $\beta$ . <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 12480-90	5.4	35

100	Animal cell DNA polymerases in DNA repair. <i>Mutation Research DNA Repair</i> , <b>1990</b> , 236, 289-300		35
99	The Werner syndrome protein is distinguished from the Bloom syndrome protein by its capacity to tightly bind diverse DNA structures. <i>PLoS ONE</i> , <b>2012</b> , 7, e30189	3-7	35
98	Why Cockayne syndrome patients do not get cancer despite their DNA repair deficiency. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 10151-6	11-5	34
97	RNA-dependent DNA polymerase: presence in normal human cells. <i>Biochemical and Biophysical Research Communications</i> , <b>1971</b> , 42, 1228-34	3-4	34
96	Altered RECQ Helicase Expression in Sporadic Primary Colorectal Cancers. <i>Translational Oncology</i> , <b>2013</b> , 6, 458-69	4-9	33
95	Creating novel enzymes by applied molecular evolution. <i>Chemistry and Biology</i> , <b>1997</b> , 4, 889-98		33
94	Erroneous base-pairing induced by a chemical carcinogen during DNA synthesis. <i>Nature</i> , <b>1974</b> , 252, 414-6	5-6	32
93	The mutator phenotype in cancer: molecular mechanisms and targeting strategies. <i>Current Drug Targets</i> , <b>2010</b> , 11, 1296-303	3	32
92	Random sequence mutagenesis and resistance to 5-fluorouridine in human thymidylate synthases. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 25809-17	5-4	31
91	In vivo mutagenesis by Escherichia coli DNA polymerase I. Ile(709) in motif A functions in base selection. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 46759-64	5-4	30
90	DNA replication in human lymphocytes during aging. <i>Journal of Cellular Physiology</i> , <b>1978</b> , 96, 235-43	7	30
89	Structure of Drosophila melanogaster dAT replicated in an in vitro system. <i>Biochemical and Biophysical Research Communications</i> , <b>1970</b> , 40, 1266-72	3-4	30
88	A mitochondrial view of aging, reactive oxygen species and metastatic cancer. <i>Aging Cell</i> , <b>2010</b> , 9, 462-5	9-9	29
87	Auto-acetylation of transcription factors as a control mechanism in gene expression. <i>Cell Cycle</i> , <b>2004</b> , 3, 114-5	4-7	29
86	6. Eucaryotic DNA Polymerases. <i>The Enzymes</i> , <b>1974</b> , 10, 173-209	2-3	28
85	RNA-dependent DNA polymerase in human lymphocytes during gene activation by phytohaemagglutinin. <i>Nature: New Biology</i> , <b>1971</b> , 232, 58-61		27
84	Infidelity of DNA synthesis by reverse transcriptase. <i>Biochemical and Biophysical Research Communications</i> , <b>1973</b> , 52, 401-6	3-4	26
83	Mutations in the R2 subunit of ribonucleotide reductase that confer resistance to hydroxyurea. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 40723-8	5-4	25



82	Tolerance of different proteins for amino acid diversity. <i>Molecular Diversity</i> , <b>1996</b> , 2, 111-8	3.1	24
81	DNA polymerase-alpha: enzymology, function, fidelity, and mutagenesis. <i>Progress in Molecular Biology and Translational Science</i> , <b>1986</b> , 33, 57-110		24
80	STIMULATION OF AMINO-ACID INCORPORATION BY NUCLEAR RIBONUCLEIC ACID FROM NORMAL AND METHYLCHOLANTHRENE-TREATED RATS. <i>Nature</i> , <b>1963</b> , 199, 809-10	50.4	24
79	Extensive subclonal mutational diversity in human colorectal cancer and its significance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> ,	11.5	23
78	Cancer: One cell at a time. <i>Nature</i> , <b>2014</b> , 512, 143-4	50.4	22
77	Fidelity of DNA polymerase-beta in neurons from young and very aged mice. <i>Journal of Neurochemistry</i> , <b>1985</b> , 45, 1273-8	6	22
76	A rapid assay for measuring nucleotide excision repair by oligonucleotide retrieval. <i>Scientific Reports</i> , <b>2014</b> , 4, 4894	4.9	21
75	Human Ku antigen tightly binds and stabilizes a tetrahelical form of the Fragile X syndrome d(CGG) <sub>n</sub> expanded sequence. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 33134-41	5.4	21
74	DNA polymerase alpha and models for proofreading. <i>Nucleic Acids Research</i> , <b>1985</b> , 13, 261-74	20.1	21
73	Infidelity of DNA synthesis: a general property of RNA tumor viruses. <i>Biochemical and Biophysical Research Communications</i> , <b>1974</b> , 61, 410-4	3.4	21
72	Clonal expansions and short telomeres are associated with neoplasia in early-onset, but not late-onset, ulcerative colitis. <i>Inflammatory Bowel Diseases</i> , <b>2013</b> , 19, 2593-602	4.5	20
71	Roles of DNA polymerase I in leading and lagging-strand replication defined by a high-resolution mutation footprint of ColE1 plasmid replication. <i>Nucleic Acids Research</i> , <b>2011</b> , 39, 7020-33	20.1	20
70	Mitochondrial DNA integrity is not dependent on DNA polymerase-beta activity. <i>DNA Repair</i> , <b>2006</b> , 5, 71-9	4.3	19
69	Redesigning the substrate specificity of human O(6)-alkylguanine-DNA alkyltransferase. Mutants with enhanced repair of O(4)-methylthymine. <i>Biochemistry</i> , <b>1999</b> , 38, 12097-103	3.2	19
68	Herpes thymidine kinase mutants with altered catalytic efficiencies obtained by random sequence selection. <i>Protein Engineering, Design and Selection</i> , <b>1994</b> , 7, 83-9	1.9	19
67	Detection of Ultra-Rare Mitochondrial Mutations in Breast Stem Cells by Duplex Sequencing. <i>PLoS ONE</i> , <b>2015</b> , 10, e0136216	3.7	19
66	Accurate RNA consensus sequencing for high-fidelity detection of transcriptional mutagenesis-induced epimutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 9415-9420	11.5	18
65	Active site mutations in mammalian DNA polymerase delta alter accuracy and replication fork progression. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 32264-72	5.4	17

64	Inefficient repair of RNA x DNA hybrids. <i>FEBS Journal</i> , <b>1997</b> , 250, 492-501		17
63	Human O(6)-alkylguanine-DNA alkyltransferase: protection against alkylating agents and sensitization to dibromoalkanes. <i>Carcinogenesis</i> , <b>1999</b> , 20, 2089-94	4.6	17
62	On the fidelity of DNA replication: herpes DNA polymerase and its associated exonuclease. <i>Nucleic Acids Research</i> , <b>1987</b> , 15, 1185-98	20.1	17
61	On mitochondria, mutations, and methodology. <i>Cell Metabolism</i> , <b>2009</b> , 10, 437	24.6	16
60	Sequence specificity of pausing by DNA polymerases. <i>Biochemical and Biophysical Research Communications</i> , <b>1989</b> , 164, 1149-56	3.4	16
59	Single-Molecule Sequencing Reveals Patterns of Preexisting Drug Resistance That Suggest Treatment Strategies in Philadelphia-Positive Leukemias. <i>Clinical Cancer Research</i> , <b>2018</b> , 24, 5321-5334	12.9	15
58	Structure-function relationships in Escherichia coli promoter DNA. <i>Progress in Molecular Biology and Translational Science</i> , <b>1990</b> , 38, 137-64		15
57	UV irradiation alters deoxynucleoside triphosphate pools in Escherichia coli. <i>Mutation Research - DNA Repair Reports</i> , <b>1984</b> , 131, 97-100		15
56	Amino acid substitutions at conserved tyrosine 52 alter fidelity and bypass efficiency of human DNA polymerase eta. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 19341-6	5.4	14
55	Site specific mutagenesis: insertion of single noncomplementary nucleotides at specified sites by error-directed DNA polymerization. <i>Nucleic Acids Research</i> , <b>1984</b> , 12, 6615-28	20.1	14
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