Matthew J Longley

List of Publications by Year
in descending order

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41 papers	4,122 citations	201674 27 h-index	289244 40 g-index
42 all docs	42 docs citations	42 times ranked	3216 citing authors

#	Article	IF	Citations
1	Hypermutability and mismatch repair deficiency in RER+ tumor cells. Cell, 1993, 75, 1227-1236.	28.9	1,031
2	DNA Polymerase Î³ in Mitochondrial DNA Replication and Repair. Chemical Reviews, 2006, 106, 383-405.	47.7	248
3	The Fidelity of Human DNA Polymerase Î³ with and without Exonucleolytic Proofreading and the p55 Accessory Subunit. Journal of Biological Chemistry, 2001, 276, 38555-38562.	3.4	218
4	Mutant POLG2 Disrupts DNA Polymerase Î³ Subunits and Causes Progressive External Ophthalmoplegia. American Journal of Human Genetics, 2006, 78, 1026-1034.	6.2	215
5	The Mitochondrial p55 Accessory Subunit of Human DNA Polymerase Î³ Enhances DNA Binding, Promotes Processive DNA Synthesis, and Confers N-Ethylmaleimide Resistance. Journal of Biological Chemistry, 1999, 274, 38197-38203.	3.4	192
6	DNA Polymerase Î´ Is Required for Human Mismatch Repair in Vitro. Journal of Biological Chemistry, 1997, 272, 10917-10921.	3.4	186
7	Characterization of the Native and Recombinant Catalytic Subunit of Human DNA Polymerase Î³:â€‰ Identification of Residues Critical for Exonuclease Activity and Dideoxynucleotide Sensitivity. Biochemistry, 1998, 37, 10529-10539.	2.5	164
8	DNA precursor asymmetries in mammalian tissue mitochondria and possible contribution to mutagenesis through reduced replication fidelity. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 4990-4995.	7.1	148
9	Long Patch Base Excision Repair in Mammalian Mitochondrial Genomes. Journal of Biological Chemistry, 2008, 283, 26349-26356.	3.4	139
10	Active Site Mutation in DNA Polymerase Î³ Associated with Progressive External Ophthalmoplegia Causes Error-prone DNA Synthesis. Journal of Biological Chemistry, 2002, 277, 15225-15228.	3.4	136
11	Consequences of mutations in human DNA polymerase Î³. Gene, 2005, 354, 125-131.	2.2	129
12	Structure-function defects of human mitochondrial DNA polymerase in autosomal dominant progressive external ophthalmoplegia. Nature Structural and Molecular Biology, 2004, 11, 770-776.	8.2	123
13	The Common A467T Mutation in the Human Mitochondrial DNA Polymerase (POLG) Compromises Catalytic Efficiency and Interaction with the Accessory Subunit. Journal of Biological Chemistry, 2005, 280, 31341-31346.	3.4	118
14	Mitochondrial genome maintenance in health and disease. DNA Repair, 2014, 19, 190-198.	2.8	111
15	POS5 Gene of Saccharomyces cerevisiae Encodes a Mitochondrial NADH Kinase Required for Stability of Mitochondrial DNA. Eukaryotic Cell, 2003, 2, 809-820.	3.4	98
16	Modulation of the W748S mutation in DNA polymerase Î³ by the E1143G polymorphismin mitochondrial disorders. Human Molecular Genetics, 2006, 15, 3473-3483.	2.9	96
17	Structural Determinants in Human DNA Polymerase Î³ Account for Mitochondrial Toxicity from Nucleoside Analogs. Journal of Molecular Biology, 2003, 329, 45-57.	4.2	85
18	Characterization of the 5â€² to 3â€² exonuclease associated withThermus aquaticusDNA polymerase. Nucleic Acids Research, 1990, 18, 7317-7322.	14.5	72

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19	Biochemical analysis of human POLG2 variants associated with mitochondrial disease. Human Molecular Genetics, 2011, 20, 3052-3066.	2.9	57
20	DNA2 Resolves Expanding Flap in Mitochondrial Base Excision Repair. Molecular Cell, 2008, 32, 457-458.	9.7	51
21	DNA polymerase Î²: A missing link of the base excision repair machinery in mammalian mitochondria. DNA Repair, 2017, 60, 77-88.	2.8	48
22	Ultrasensitive deletion detection links mitochondrial DNA replication, disease, and aging. Genome Biology, 2020, 21, 248.	8.8	48
23	Progressive External Ophthalmoplegia and Vision and Hearing Loss in a Patient With Mutations in POLG2 and OPA1. Archives of Neurology, 2008, 65, 125-31.	4.5	46
24	Disease Variants of the Human Mitochondrial DNA Helicase Encoded by C10orf2 Differentially Alter Protein Stability, Nucleotide Hydrolysis, and Helicase Activity. Journal of Biological Chemistry, 2010, 285, 29690-29702.	3.4	45
25	Disease Mutations in the Human Mitochondrial DNA Polymerase Thumb Subdomain Impart Severe Defects in Mitochondrial DNA Replication. Journal of Biological Chemistry, 2009, 284, 19501-19510.	3.4	43
26	Mono-allelic POLG expression resulting from nonsense-mediated decay and alternative splicing in a patient with Alpers syndrome. DNA Repair, 2005, 4, 1381-1389.	2.8	38
27	Mitochondrial single-stranded DNA binding protein novel de novo SSBP1 mutation in a child with single large-scale mtDNA deletion (SLSMD) clinically manifesting as Pearson, Kearns-Sayre, and Leigh syndromes. PLoS ONE, 2019, 14, e0221829.	2.5	32
28	Complementation of aprataxin deficiency by base excision repair enzymes in mitochondrial extracts. Nucleic Acids Research, 2017, 45, 10079-10088.	14.5	24
29	Single-molecule DREEM imaging reveals DNA wrapping around human mitochondrial single-stranded DNA binding protein. Nucleic Acids Research, 2018, 46, 11287-11302.	14.5	23
30	A p.R369G POLG2 mutation associated with adPEO and multiple mtDNA deletions causes decreased affinity between polymerase Î³ subunits. Mitochondrion, 2012, 12, 313-319.	3.4	21
31	The C-terminal tail of the NEIL1 DNA glycosylase interacts with the human mitochondrial single-stranded DNA binding protein. DNA Repair, 2018, 65, 11-19.	2.8	21
32	Purification and functional characterization of human mitochondrial DNA polymerase gamma harboring disease mutations. Methods, 2010, 51, 379-384.	3.8	17
33	Preparation of Human Mitochondrial Single-Stranded DNA-Binding Protein. Methods in Molecular Biology, 2009, 554, 73-85.	0.9	17
34	[41]In situ detection of DNA-metabolizing enzymes following polyacrylamide gel electrophoresis. Methods in Enzymology, 1993, 218, 587-609.	1.0	16
35	Synergistic Effects of the in cis T251I and P587L Mitochondrial DNA Polymerase Î³ Disease Mutations. Journal of Biological Chemistry, 2017, 292, 4198-4209.	3.4	16
36	Single-molecule level structural dynamics of DNA unwinding by human mitochondrial Twinkle helicase. Journal of Biological Chemistry, 2020, 295, 5564-5576.	3.4	13

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37	Polymerase Î³ efficiently replicates through many natural template barriers but stalls at the HSP1 quadruplex. Journal of Biological Chemistry, 2020, 295, 17802-17815.	3.4	13
38	Characterization of the human homozygous R182W POLG2 mutation in mitochondrial DNA depletion syndrome. PLoS ONE, 2018, 13, e0203198.	2.5	11
39	Purification, Separation, and Identification of the Human mtDNA Polymerase With and Without Its Accessory Subunit. , 2002, 197, 245-257.		7
40	Analysis of Translesion DNA Synthesis by the Mitochondrial DNA Polymerase Î³. Methods in Molecular Biology, 2016, 1351, 19-26.	0.9	4
41	Using Atomic Force Microscopy to Study the Real Time Dynamics of DNA Unwinding by Mitochondrial Twinkle Helicase. Bio-protocol, 2021, 11, e4139.	0.4	2