Murat K Saparbaev

List of Publications by Year
in descending order

104	4,138	109321 35	123424 61
papers	citations	h-index	g-index

107	107	107	3423
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Alternative nucleotide incision repair pathway for oxidative DNA damage. Nature, 2002, 415, 183-187.	27.8	276
2	Excision of hypoxanthine from DNA containing dIMP residues by the Escherichia coli, yeast, rat, and human alkylpurine DNA glycosylases.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 5873-5877.	7.1	249
3	Escherichia coil,Saccharomyces cerevisiae, rat and human 3-methyladenine DNA glycosylases repair 1,N6-ethenoadenine when present in DNA. Nucleic Acids Research, 1995, 23, 3750-3755.	14.5	207
4	Enzymology of the repair of free radicals-induced DNA damage. Oncogene, 2002, 21, 8905-8925.	5.9	186
5	The major human AP endonuclease (Ape1) is involved in the nucleotide incision repair pathway. Nucleic Acids Research, 2004, 32, 73-81.	14.5	181
6	3,N4-ethenocytosine, a highly mutagenic adduct, is a primary substrate for Escherichia coli double-stranded uracil-DNA glycosylase and human mismatch-specific thymine-DNA glycosylase. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 8508-8513.	7.1	160
7	Cisplatin Resistance Associated with PARP Hyperactivation. Cancer Research, 2013, 73, 2271-2280.	0.9	143
8	Poly(ADP-ribose) polymerases covalently modify strand break termini in DNA fragmentsin vitro. Nucleic Acids Research, 2016, 44, gkw675.	14.5	94
9	1,N 2-Ethenoguanine, a Mutagenic DNA Adduct, Is a Primary Substrate of Escherichia coliMismatch-specific Uracil-DNA Glycosylase and Human Alkylpurine-DNA-N-Glycosylase. Journal of Biological Chemistry, 2002, 277, 26987-26993.	3.4	92
10	Predictive biomarkers for cancer therapy with PARP inhibitors. Oncogene, 2014, 33, 3894-3907.	5.9	89
11	Antimutagenic role of base-excision repair enzymes upon free radical-induced DNA damage. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1998, 402, 93-102.	1.0	88
12	DNA repair and the origins of urinary oxidized 2'-deoxyribonucleosides. Mutagenesis, 2010, 25, 433-442.	2.6	82
13	Major oxidative products of cytosine are substrates for the nucleotide incision repair pathway. DNA Repair, 2007, 6, 8-18.	2.8	81
14	A molecular beacon assay for measuring base excision repair activities. Biochemical and Biophysical Research Communications, 2004, 319, 240-246.	2.1	80
15	Enzymology of repair of etheno-adducts. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2003, 531, 219-229.	1.0	79
16	Biochemical and structural characterization of the glycosylase domain of MBD4 bound to thymine and 5-hydroxymethyuracil-containing DNA. Nucleic Acids Research, 2012, 40, 9917-9926.	14.5	77
17	Uncoupling of the base excision and nucleotide incision repair pathways reveals their respective biological roles. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2564-2569.	7.1	71
18	Uracil in duplex DNA is a substrate for the nucleotide incision repair pathway in human cells. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3695-703.	7.1	71

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19	The 3â€²â†’5â€² Exonuclease of Apn1 Provides an Alternative Pathway To Repair 7,8-Dihydro-8-Oxodeoxyguanosine in Saccharomyces cerevisiae. Molecular and Cellular Biology, 2005, 25, 6380-6390.	2.3	70
20	Characterisation of new substrate specificities of Escherichia coli and Saccharomyces cerevisiae AP endonucleases. Nucleic Acids Research, 2003, 31, 6344-6353.	14.5	69
21	The Ring Fragmentation Product of Thymidine C5-Hydrate When Present in DNA Is Repaired by theEscherichia coliFpg and Nth Proteinsâ€. Biochemistry, 1998, 37, 7757-7763.	2.5	65
22	Apoptotic Topoisomerase I-DNA Complexes Induced by Staurosporine-mediated Oxygen Radicals. Journal of Biological Chemistry, 2004, 279, 50499-50504.	3.4	62
23	Psoralen-induced DNA adducts are substrates for the base excision repair pathway in human cells. Nucleic Acids Research, 2007, 35, 5672-5682.	14.5	58
24	The Human Oxidative DNA Glycosylase NEIL1 Excises Psoralen-induced Interstrand DNA Cross-links in a Three-stranded DNA Structure. Journal of Biological Chemistry, 2009, 284, 11963-11970.	3.4	57
25	Î±-Anomeric Deoxynucleotides, Anoxic Products of Ionizing Radiation, Are Substrates for the Endonuclease IV-Type AP Endonucleasesâ€. Biochemistry, 2004, 43, 15210-15216.	2.5	55
26	Conformational Dynamics of Human AP Endonuclease in Base Excision and Nucleotide Incision Repair Pathways. Journal of Biomolecular Structure and Dynamics, 2009, 26, 637-652.	3.5	47
27	Step-by-step mechanism of DNA damage recognition by human 8-oxoguanine DNA glycosylase. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 387-395.	2.4	43
28	Conformational Dynamics of DNA Repair by Escherichia coli Endonuclease III. Journal of Biological Chemistry, 2015, 290, 14338-14349.	3.4	42
29	The mechanism of human tyrosyl-DNA phosphodiesterase 1 in the cleavage of AP site and its synthetic analogs. DNA Repair, 2013, 12, 1037-1042.	2.8	40
30	Insight into mechanisms of 3â€²-5â€² exonuclease activity and removal of bulky 8,5â€²-cyclopurine adducts by apurinic/apyrimidinic endonucleases. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3071-80.	7.1	40
31	Interactions of the human, rat, Saccharomyces cerevisiae and Escherichia coli 3-methyladenine-DNA glycosylases with DNA containing dIMP residues. Nucleic Acids Research, 2000, 28, 1332-1339.	14.5	39
32	Real-time studies of conformational dynamics of the repair enzyme E. coli formamidopyrimidine-DNA glycosylase and its DNA complexes during catalytic cycle. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2010, 685, 3-10.	1.0	39
33	The HAP1 protein stimulates the turnover of human mismatch-specific thymine-DNA-glycosylase to process 3,N4-ethenocytosine residues. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2001, 480-481, 277-284.	1.0	37
34	Hijacking of the Human Alkyl-N-purine-DNA Glycosylase by 3,N4-Ethenocytosine, a Lipid Peroxidation-induced DNA Adduct. Journal of Biological Chemistry, 2004, 279, 17723-17730.	3.4	37
35	Genetic and Biochemical Characterization of Human AP Endonuclease 1 Mutants Deficient in Nucleotide Incision Repair Activity. PLoS ONE, 2010, 5, e12241.	2.5	37
36	New Insights in the Removal of the Hydantoins, Oxidation Product of Pyrimidines, via the Base Excision and Nucleotide Incision Repair Pathways. PLoS ONE, 2011, 6, e21039.	2.5	35

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37	Effects of nitrous acid treatment on the survival and mutagenesis of Escherichia coli cells lacking base excision repair(hypoxanthine-DNA glycosylase-ALK A protein) and/or nucleotide excision repair. Mutagenesis, 1997, 12, 23-28.	2.6	34
38	Characterisation of the substrate specificity of homogeneous vaccinia virus uracil-DNA glycosylase. Nucleic Acids Research, 2003, 31, 4950-4957.	14.5	34
39	Dimerization of plasmid DNA accelerates selection for antibiotic resistance. Molecular Microbiology, 1996, 20, 101-108.	2.5	33
40	The Human DNA glycosylases NEIL1 and NEIL3 Excise Psoralen-Induced DNA-DNA Cross-Links in a Four-Stranded DNA Structure. Scientific Reports, 2017, 7, 17438.	3.3	32
41	Pre-steady-state fluorescence analysis of damaged DNA transfer from human DNA glycosylases to AP endonuclease APE1. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 3042-3051.	2.4	30
42	The role of the N-terminal domain of human apurinic/apyrimidinic endonuclease 1, APE1, in DNA glycosylase stimulation. DNA Repair, 2018, 64, 10-25.	2.8	30
43	Highly Mutagenic Exocyclic DNA Adducts Are Substrates for the Human Nucleotide Incision Repair Pathway. PLoS ONE, 2012, 7, e51776.	2.5	29
44	Structural comparison of AP endonucleases from the exonuclease III family reveals new amino acid residues in human AP endonuclease 1 that are involved in incision of damaged DNA. Biochimie, 2016, 128-129, 20-33.	2.6	28
45	Coupling of the nucleotide incision and 3â€² â†’ 5â€² exonuclease activities in Escherichia coli endonuclease IV: Structural and genetic evidences. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2010, 685, 70-79.	1.0	27
46	Aberrant base excision repair pathway of oxidatively damaged DNA: Implications for degenerative diseases. Free Radical Biology and Medicine, 2017, 107, 266-277.	2.9	27
47	Pre-steady-state kinetic analysis of damage recognition by human single-strand selective monofunctional uracil-DNA glycosylase SMUG1. Molecular BioSystems, 2017, 13, 2638-2649.	2.9	26
48	Characterization of Two Independent Amino Acid Substitutions that Disrupt the DNA Repair Functions of the Yeast Apn1â€. Biochemistry, 2003, 42, 6436-6445.	2.5	24
49	Characterization of Caenorhabditis elegans Exonuclease-3 and Evidence That a Mg2+-Dependent Variant Exhibits a Distinct Mode of Action on Damaged DNA. Biochemistry, 2005, 44, 12835-12848.	2.5	24
50	Mechanism of stimulation of DNA binding of the transcription factors by human apurinic/apyrimidinic endonuclease 1, APE1. DNA Repair, 2019, 82, 102698.	2.8	24
51	Role of mismatch-specific uracil-DNA glycosylase in repair of 3,N4-ethenocytosine in vivo. DNA Repair, 2004, 3, 1579-1590.	2.8	23
52	7,8-dihydro-8-oxoadenine, a highly mutagenic adduct, is repaired by Escherichia coli and human mismatch-specific uracil/thymine-DNA glycosylases. Nucleic Acids Research, 2013, 41, 912-923.	14.5	23
53	The major Arabidopsis thaliana apurinic/apyrimidinic endonuclease, ARP is involved in the plant nucleotide incision repair pathway. DNA Repair, 2016, 48, 30-42.	2.8	23
54	2'-Deoxyribonolactone lesion produces G->A transitions in Escherichia coli. Nucleic Acids Research, 2004, 32, 2937-2946.	14.5	21

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55	Lipid peroxidation product 4-hydroxy-2-nonenal modulates base excision repair in human cells. DNA Repair, 2014, 22, 1-11.	2.8	21
56	TET2-mediated 5-hydroxymethylcytosine induces genetic instability and mutagenesis. DNA Repair, 2016, 43, 78-88.	2.8	21
57	The Fanconi anemia pathway promotes DNA glycosylaseâ€dependent excision of interstrand DNA crosslinks. Environmental and Molecular Mutagenesis, 2010, 51, 508-519.	2.2	20
58	Cloning and Characterization of a Wheat Homologue of Apurinic/Apyrimidinic Endonuclease Ape1L. PLoS ONE, 2014, 9, e92963.	2.5	19
59	Excision of 8â€oxoguanine from methylated CpG dinucleotides by human 8â€oxoguanine DNA glycosylase. FEBS Letters, 2013, 587, 3129-3134.	2.8	18
60	Aberrant repair initiated by mismatch-specific thymine-DNA glycosylases provides a mechanism for the mutational bias observed in CpG islands. Nucleic Acids Research, 2014, 42, 6300-6313.	14.5	18
61	Functional characterization of the Caenorhabditis elegans DNA repair enzyme APN-1. DNA Repair, 2012, 11, 811-822.	2.8	17
62	Characterization of DNA substrate specificities of apurinic/apyrimidinic endonucleases from Mycobacterium tuberculosis. DNA Repair, 2015, 33, 1-16.	2.8	17
63	Clustered DNA Damages as Dosemeters for Ionising Radiation Exposure and Biological Responses. Radiation Protection Dosimetry, 2001, 97, 33-38.	0.8	16
64	Lys98 Substitution in Human AP Endonuclease 1 Affects the Kinetic Mechanism of Enzyme Action in Base Excision and Nucleotide Incision Repair Pathways. PLoS ONE, 2011, 6, e24063.	2.5	16
65	Oxidatively Generated Guanine(C8)-Thymine(N3) Intrastrand Cross-links in Double-stranded DNA Are Repaired by Base Excision Repair Pathways. Journal of Biological Chemistry, 2015, 290, 14610-14617.	3.4	16
66	Repair of oxidized purines and damaged pyrimidines byE. coli Fpg protein: Different roles of proline 2 and lysine 57 residues. Environmental and Molecular Mutagenesis, 2002, 39, 10-17.	2.2	15
67	AlkA Protein Is the Third Escherichia coli DNA Repair Protein Excising a Ring Fragmentation Product of Thymine. Biochemistry, 2000, 39, 14263-14268.	2.5	15
68	Substrate Specificity of Homogeneous Monkeypox Virus Uracil-DNA Glycosylase. Biochemistry, 2007, 46, 11874-11881.	2.5	14
69	African swine fever virus AP endonuclease is a redox-sensitive enzyme that repairs alkylating and oxidative damage to DNA. Virology, 2009, 390, 102-109.	2.4	13
70	Action of multiple base excision repair enzymes on the 2â€²-deoxyribonolactone. Biochemical and Biophysical Research Communications, 2005, 328, 1188-1195.	2.1	12
71	Reading Targeted DNA Damage in the Active Demethylation Pathway: Role of Accessory Domains of Eukaryotic AP Endonucleases and Thymine-DNA Glycosylases. Journal of Molecular Biology, 2020, 432, 1747-1768.	4.2	12
72	DNA-Histone Cross-Links: Formation and Repair. Frontiers in Cell and Developmental Biology, 2020, 8, 607045.	3.7	12

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73	Modulation of the Apurinic/Apyrimidinic Endonuclease Activity of Human APE1 and of Its Natural Polymorphic Variants by Base Excision Repair Proteins. International Journal of Molecular Sciences, 2020, 21, 7147.	4.1	12
74	Role of Base Excision Repair Pathway in the Processing of Complex DNA Damage Generated by Oxidative Stress and Anticancer Drugs. Frontiers in Cell and Developmental Biology, 2020, 8, 617884.	3.7	11
75	Presence of base excision repair enzymes in the wheat aleurone and their activation in cells undergoing programmed cell death. Plant Physiology and Biochemistry, 2011, 49, 1155-1164.	5.8	10
76	Wheat Germination Is Dependent on Plant Target of Rapamycin Signaling. Frontiers in Cell and Developmental Biology, 2020, 8, 606685.	3.7	10
77	Mismatch dependent uracil/thymine-DNA glycosylases excise exocyclic hydroxyethano and hydroxypropano cytosine adducts.. Acta Biochimica Polonica, 2005, 52, 149-165.	0.5	10
78	Impact of Pyrophosphate andO-Ethyl-Substituted Pyrophosphate Groups on DNA Structure. Journal of Physical Chemistry B, 2007, 111, 432-438.	2.6	9
79	Kinetic mechanism of human apurinic/apyrimidinic endonuclease action in nucleotide incision repair. Biochemistry (Moscow), 2011, 76, 273-281.	1.5	8
80	DNA Repair and Mutagenesis in Vertebrate Mitochondria: Evidence for Asymmetric DNA Strand Inheritance. Advances in Experimental Medicine and Biology, 2020, 1241, 77-100.	1.6	8
81	Characterization of biochemical properties of an apurinic/apyrimidinic endonuclease from Helicobacter pylori. PLoS ONE, 2018, 13, e0202232.	2.5	7
82	Two sequential phosphates 3â€² adjacent to the 8-oxoguanosine are crucial for lesion excision by E. coli Fpg protein and human 8-oxoguanine-DNA glycosylase. Biochimie, 2005, 87, 1079-1088.	2.6	6
83	High Resolution Characterization of Formamidopyrimidine-DNA Glycosylase Interaction with Its Substrate by Chemical Cross-linking and Mass Spectrometry Using Substrate Analogs. Journal of Biological Chemistry, 2006, 281, 32353-32365.	3.4	6
84	Direct DNA Lesion Reversal and Excision Repair in Escherichia coli. EcoSal Plus, 2013, 5, .	5.4	6
85	The Arabidopsis thaliana Poly(ADP-Ribose) Polymerases 1 and 2 Modify DNA by ADP-Ribosylating Terminal Phosphate Residues. Frontiers in Cell and Developmental Biology, 2020, 8, 606596.	3.7	6
86	The Enigma of Substrate Recognition and Catalytic Efficiency of APE1-Like Enzymes. Frontiers in Cell and Developmental Biology, 2021, 9, 617161.	3.7	6
87	Evolutionary Origins of DNA Repair Pathways: Role of Oxygen Catastrophe in the Emergence of DNA Glycosylases. Cells, 2021, 10, 1591.	4.1	6
88	Common Kinetic Mechanism of Abasic Site Recognition by Structurally Different Apurinic/Apyrimidinic Endonucleases. International Journal of Molecular Sciences, 2021, 22, 8874.	4.1	6
89	Site-Directed Insertion of Long Single-Stranded DNA Fragments into Plasmid DNA. DNA and Cell Biology, 1990, 9, 63-69.	1.9	5
90	Initiation of 8-oxoguanine base excision repair within trinucleotide tandem repeats. Biochemistry (Moscow), 2012, 77, 270-279.	1.5	5

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91	Functional variants of human APE1 rescue the DNA repair defects of the yeast AP endonuclease/3â€²-diesterase-deficient strain. DNA Repair, 2014, 22, 53-66.	2.8	5
92	Characterization of Aspergillus niger endo-1,4-Î²-glucanase ENG1 secreted from Saccharomyces cerevisiae using different expression vectors. Genetics and Molecular Research, 2015, 14, 6439-6452.	0.2	5
93	The chemical mutagen dimethyl sulphate induces homologous recombination of plasmid DNA by increasing the binding of RecA protein to duplex DNA. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 1991, 249, 189-193.	1.0	4
94	Crystallization and preliminary X-ray analysis of human endonuclease 1 (APE1) in complex with an oligonucleotide containing a 5,6-dihydrouracil (DHU) or an Î±-anomeric 2â€²-deoxyadenosine (Î±dA) modified base. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 798-800.	0.7	4
95	Kinetic mechanism of the interaction of Saccharomyces cerevisiae AP-endonuclease 1 with DNA substrates. Biochemistry (Moscow), 2012, 77, 1162-1171.	1.5	4
96	Mechanistic insight into the role of Poly(ADP-ribosyl)ation in DNA topology modulation and response to DNA damage. Mutagenesis, 2020, 35, 107-118.	2.6	4
97	Nucleotide Incision Repair: An Alternative and Ubiquitous Pathway to Handle Oxidative DNA Damage. , 2007, , 54-66.		4
98	Aberrant repair initiated by the adenine-DNA glycosylase does not play a role in UV-induced mutagenesis inEscherichia coli. PeerJ, 2018, 6, e6029.	2.0	3
99	Comparative Analysis of Exo- and Endonuclease Activities of APE1-like Enzymes. International Journal of Molecular Sciences, 2022, 23, 2869.	4.1	3
100	Pre-steady-state kinetic and mutational insights into mechanisms of endo- and exonuclease DNA processing by mutant forms of human AP endonuclease. Biochimica Et Biophysica Acta - General Subjects, 2022, 1866, 130198.	2.4	1
101	New Noncleavable Analogs of 8-Oxoguanine-DNA Glycosylase Substrates. Molecular Biology, 2004, 38, 728-736.	1.3	0
102	Glycosylase Repair. , 2013, , 350-353.		0
103	Biochemical parameters of XthA apurinic/apyrimidinic (AP) endonuclease of Helicobacter pylori. Journal of Biotechnology, 2018, 280, S71.	3.8	0
104	Repair of DNA Damaged by Free Radicals. , 1999, , 237-250.		0