Keith W Caldecott

List of Publications by Year
in descending order

101	12,447	24978 57	31759 101
papers	citations	h-index	g-index

107	107	107	9492
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The threat of programmed DNA damage to neuronal genome integrity and plasticity. Nature Genetics, 2022, 54, 115-120.	9.4	35
2	PARP inhibition impedes the maturation of nascent DNA strands during DNA replication. Nature Structural and Molecular Biology, 2022, 29, 329-338.	3.6	57
3	DNA single-strand break repair and human genetic disease. Trends in Cell Biology, 2022, 32, 733-745.	3.6	59
4	Neuronal enhancers are hotspots for DNA single-strand break repair. Nature, 2021, 593, 440-444.	13.7	126
5	Parp1 hyperactivity couples DNA breaks to aberrant neuronal calcium signalling and lethal seizures. EMBO Reports, 2021, 22, e51851.	2.0	37
6	XRCC1 prevents toxic PARP1 trapping during DNA base excision repair. Molecular Cell, 2021, 81, 3018-3030.e5.	4.5	80
7	The SARS-CoV-2 Nsp3 macrodomain reverses PARP9/DTX3L-dependent ADP-ribosylation induced by interferon signaling. Journal of Biological Chemistry, 2021, 297, 101041.	1.6	61
8	XRCC1 protects transcription from toxic PARP1 activity during DNA base excision repair. Nature Cell Biology, 2021, 23, 1287-1298.	4.6	26
9	Mammalian DNA base excision repair: Dancing in the moonlight. DNA Repair, 2020, 93, 102921.	1.3	57
10	Characterization of a novel loss-of-function variant in TDP2 in two adult patients with spinocerebellar ataxia autosomal recessive 23 (SCAR23). Journal of Human Genetics, 2020, 65, 1135-1141.	1.1	7
11	Untangling trapped topoisomerases with tyrosyl-DNA phosphodiesterases. DNA Repair, 2020, 94, 102900.	1.3	16
12	Pathological mutations in PNKP trigger defects in DNA single-strand break repair but not DNA double-strand break repair. Nucleic Acids Research, 2020, 48, 6672-6684.	6.5	37
13	Pathogenic ARH3 mutations result in ADP-ribose chromatin scars during DNA strand break repair. Nature Communications, 2020, 11, 3391.	5.8	25
14	Effects of TDP2/VPg Unlinkase Activity on Picornavirus Infections Downstream of Virus Translation. Viruses, 2020, 12, 166.	1.5	7
15	XRCC1 protein; Form and function. DNA Repair, 2019, 81, 102664.	1.3	105
16	Efficient Single-Strand Break Repair Requires Binding to Both Poly(ADP-Ribose) and DNA by the Central BRCT Domain of XRCC1. Cell Reports, 2019, 26, 573-581.e5.	2.9	58
17	Topoisomerase II-Induced Chromosome Breakage and Translocation Is Determined by Chromosome Architecture and Transcriptional Activity. Molecular Cell, 2019, 75, 252-266.e8.	4.5	145
18	Deazaflavin Inhibitors of TDP2 with Cellular Activity Can Affect Etoposide Influx and/or Efflux. ACS Chemical Biology, 2019, 14, 1110-1114.	1.6	7

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19	Novel PNKP mutations causing defective DNA strand break repair and PARP1 hyperactivity in MCSZ. Neurology: Genetics, 2019, 5, e320.	0.9	15
20	Perspectives on PARPs in S Phase. Trends in Genetics, 2019, 35, 412-422.	2.9	48
21	Homozygous pathogenic variant in BRAT1 associated with nonprogressive cerebellar ataxia. Neurology: Genetics, 2019, 5, e359.	0.9	13
22	FUS (fused in sarcoma) is a component of the cellular response to topoisomerase Iâ€“induced DNA breakage and transcriptional stress. Life Science Alliance, 2019, 2, e201800222.	1.3	20
23	The Importance of Poly(ADP-Ribose) Polymerase as a Sensor of Unligated Okazaki Fragments during DNA Replication. Molecular Cell, 2018, 71, 319-331.e3.	4.5	251
24	Confirming TDP2 mutation in spinocerebellar ataxia autosomal recessive 23 (SCAR23). Neurology: Genetics, 2018, 4, e262.	0.9	27
25	Nonsyndromic cerebellar ataxias associated with disorders of DNA single-strand break repair. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2018, 155, 105-115.	1.0	36
26	Overlapping roles for PARP1 and PARP2 in the recruitment of endogenous XRCC1 and PNKP into oxidized chromatin. Nucleic Acids Research, 2017, 45, gkw1246.	6.5	118
27	XRCC1 mutation is associated with PARP1 hyperactivation and cerebellar ataxia. Nature, 2017, 541, 87-91.	13.7	209
28	Acylpeptide hydrolase is a component of the cellular response to DNA damage. DNA Repair, 2017, 58, 52-61.	1.3	19
29	TDP2 suppresses chromosomal translocations induced by DNA topoisomerase II during gene transcription. Nature Communications, 2017, 8, 233.	5.8	53
30	TDP2, TOP2, and SUMO: what is ZATT about?. Cell Research, 2017, 27, 1405-1406.	5.7	18
31	The Rev1 interacting region (RIR) motif in the scaffold protein XRCC1 mediates a low-affinity interaction with polynucleotide kinase/phosphatase (PNKP) during DNA single-strand break repair. Journal of Biological Chemistry, 2017, 292, 16024-16031.	1.6	16
32	Mode of action of DNA-competitive small molecule inhibitors of tyrosyl DNA phosphodiesterase 2. Biochemical Journal, 2016, 473, 1869-1879.	1.7	30
33	The PARP Inhibitor AZD2461 Provides Insights into the Role of PARP3 Inhibition for Both Synthetic Lethality and Tolerability with Chemotherapy in Preclinical Models. Cancer Research, 2016, 76, 6084-6094.	0.4	73
34	The Ku-binding motif is a conserved module for recruitment and stimulation of non-homologous end-joining proteins. Nature Communications, 2016, 7, 11242.	5.8	57
35	PARP3 is a sensor of nicked nucleosomes and monoribosylates histone H2BGlu2. Nature Communications, 2016, 7, 12404.	5.8	60
36	Divergent Requirement for a DNA Repair Enzyme during Enterovirus Infections. MBio, 2016, 7, e01931-15.	1.8	13

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37	Versatility in phospho-dependent molecular recognition of the XRCC1 and XRCC4 DNA-damage scaffolds by aprataxin-family FHA domains. DNA Repair, 2015, 35, 116-125.	1.3	25
38	Does Tyrosyl DNA Phosphodiesterase-2 Play a Role in Hepatitis B Virus Genome Repair?. PLoS ONE, 2015, 10, e0128401.	1.1	69
39	The XRCC1 phosphate-binding pocket binds poly (ADP-ribose) and is required for XRCC1 function. Nucleic Acids Research, 2015, 43, 6934-6944.	6.5	83
40	The Role of PARPs in DNA Strand Break Repair. Cancer Drug Discovery and Development, 2015, , 47-78.	0.2	1
41	The Yin and Yang of DAXX regulation. Cell Cycle, 2015, 14, 295-296.	1.3	1
42	PARP-1 dependent recruitment of the amyotrophic lateral sclerosis-associated protein FUS/TLS to sites of oxidative DNA damage. Nucleic Acids Research, 2014, 42, 307-314.	6.5	145
43	TDP2 protects transcription from abortive topoisomerase activity and is required for normal neural function. Nature Genetics, 2014, 46, 516-521.	9.4	122
44	One ring to bring them allâ€"The role of Ku in mammalian non-homologous end joining. DNA Repair, 2014, 17, 30-38.	1.3	60
45	Riboseâ€"An Internal Threat to DNA. Science, 2014, 343, 260-261.	6.0	57
46	DNA single-strand break repair. Experimental Cell Research, 2014, 329, 2-8.	1.2	139
47	Generation of assays and antibodies to facilitate the study of human 5â€²-tyrosyl DNA phosphodiesterase. Analytical Biochemistry, 2013, 436, 145-150.	1.1	17
48	DNA strand break repair and neurodegeneration. DNA Repair, 2013, 12, 558-567.	1.3	79
49	TDP2â€"Dependent Non-Homologous End-Joining Protects against Topoisomerase IIâ€"Induced DNA Breaks and Genome Instability in Cells and In Vivo. PLoS Genetics, 2013, 9, e1003226.	1.5	139
50	Impact of PNKP mutations associated with microcephaly, seizures and developmental delay on enzyme activity and DNA strand break repair. Nucleic Acids Research, 2012, 40, 6608-6619.	6.5	62
51	APLF promotes the assembly and activity of non-homologous end joining protein complexes. EMBO Journal, 2012, 32, 112-125.	3.5	118
52	TDP2 promotes repair of topoisomerase I-mediated DNA damage in the absence of TDP1. Nucleic Acids Research, 2012, 40, 8371-8380.	6.5	86
53	Tyrosyl DNA phosphodiesterase 2, an enzyme fit for purpose. Nature Structural and Molecular Biology, 2012, 19, 1212-1213.	3.6	20
54	PARP-3 and APLF Function Together to Accelerate Nonhomologous End-Joining. Molecular Cell, 2011, 41, 33-45.	4.5	278

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55	3rd International Genome Dynamics in Neuroscience Conference: â€œDNA repair and neurological diseaseâ€• Mechanisms of Ageing and Development, 2011, 132, 353-354.	2.2	0
56	TDP2/TTRAP Is the Major 5â€²-Tyrosyl DNA Phosphodiesterase Activity in Vertebrate Cells and Is Critical for Cellular Resistance to Topoisomerase II-induced DNA Damage. Journal of Biological Chemistry, 2011, 286, 403-409.	1.6	137
57	Mutations in PNKP cause microcephaly, seizures and defects in DNA repair. Nature Genetics, 2010, 42, 245-249.	9.4	268
58	DNA 3â€²-Phosphatase Activity Is Critical for Rapid Global Rates of Single-Strand Break Repair following Oxidative Stress. Molecular and Cellular Biology, 2009, 29, 4653-4662.	1.1	56
59	Defective DNA Ligation during Short-Patch Single-Strand Break Repair in Ataxia Oculomotor Apraxia 1. Molecular and Cellular Biology, 2009, 29, 1354-1362.	1.1	57
60	Synergistic decrease of DNA single-strand break repair rates in mouse neural cells lacking both Tdp1 and aprataxin. DNA Repair, 2009, 8, 760-766.	1.3	74
61	A human 5â€²-tyrosyl DNA phosphodiesterase that repairs topoisomerase-mediated DNA damage. Nature, 2009, 461, 674-678.	13.7	364
62	The genesis of cerebellar interneurons and the prevention of neural DNA damage require XRCC1. Nature Neuroscience, 2009, 12, 973-980.	7.1	105
63	Short-patch single-strand break repair in ataxia oculomotor apraxia-1. Biochemical Society Transactions, 2009, 37, 577-581.	1.6	14
64	Chromosomal Single-Strand Break Repair. , 2009, , 261-284.		1
65	Single-strand break repair and genetic disease. Nature Reviews Genetics, 2008, 9, 619-631.	7.7	820
66	DNA damage responses and neurological disease. Preface. DNA Repair, 2008, 7, 1009.	1.3	6
67	APLF (C2orf13) Is a Novel Component of Poly(ADP-Ribose) Signaling in Mammalian Cells. Molecular and Cellular Biology, 2008, 28, 4620-4628.	1.1	85
68	Poly(ADP-Ribose) Polymerase 1 Accelerates Single-Strand Break Repair in Concert with Poly(ADP-Ribose) Glycohydrolase. Molecular and Cellular Biology, 2007, 27, 5597-5605.	1.1	266
69	XRCC1 Stimulates Polynucleotide Kinase by Enhancing Its Damage Discrimination and Displacement from DNA Repair Intermediates. Journal of Biological Chemistry, 2007, 282, 28004-28013.	1.6	46
70	APLF (C2orf13) Is a Novel Human Protein Involved in the Cellular Response to Chromosomal DNA Strand Breaks. Molecular and Cellular Biology, 2007, 27, 3793-3803.	1.1	141
71	DNA Strand Break Repair and Human Genetic Disease. Annual Review of Genomics and Human Genetics, 2007, 8, 37-55.	2.5	251
72	TDP1 facilitates chromosomal single-strand break repair in neurons and is neuroprotective in vivo. EMBO Journal, 2007, 26, 4720-4731.	3.5	185

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73	Mammalian single-strand break repair: Mechanisms and links with chromatin. DNA Repair, 2007, 6, 443-453.	1.3	141
74	TDP1 facilitates repair of ionizing radiation-induced DNA single-strand breaks. DNA Repair, 2007, 6, 1485-1495.	1.3	71
75	Measurement of Chromosomal DNA Singleâ€Strand Breaks and Replication Fork Progression Rates. Methods in Enzymology, 2006, 409, 410-425.	0.4	40
76	TDP1-dependent DNA single-strand break repair and neurodegeneration. Mutagenesis, 2006, 21, 219-224.	1.0	56
77	The neurodegenerative disease protein aprataxin resolves abortive DNA ligation intermediates. Nature, 2006, 443, 713-716.	13.7	348
78	An Achilles' heel for breast cancer?. Nature Structural and Molecular Biology, 2005, 12, 387-388.	3.6	4
79	Defective DNA single-strand break repair in spinocerebellar ataxia with axonal neuropathy-1. Nature, 2005, 434, 108-113.	13.7	382
80	XRCC1-DNA polymerase Â interaction is required for efficient base excision repair. Nucleic Acids Research, 2004, 32, 2550-2555.	6.5	120
81	Biophysical Characterization of Human XRCC1 and Its Binding to Damaged and Undamaged DNAâ€. Biochemistry, 2004, 43, 16505-16514.	1.2	55
82	DNA single-strand breaks and neurodegeneration. DNA Repair, 2004, 3, 875-882.	1.3	68
83	The ataxiaâ€“oculomotor apraxia 1 gene product has a role distinct from ATM and interacts with the DNA strand break repair proteins XRCC1 and XRCC4. DNA Repair, 2004, 3, 1493-1502.	1.3	176
84	The Protein Kinase CK2 Facilitates Repair of Chromosomal DNA Single-Strand Breaks. Cell, 2004, 117, 17-28.	13.5	302
85	Spatial and Temporal Cellular Responses to Single-Strand Breaks in Human Cells. Molecular and Cellular Biology, 2003, 23, 3974-3981.	1.1	307
86	DNA Single-Strand Break Repair and Spinocerebellar Ataxia. Cell, 2003, 112, 7-10.	13.5	138
87	XRCC3 and Rad51 Modulate Replication Fork Progression on Damaged Vertebrate Chromosomes. Molecular Cell, 2003, 11, 1109-1117.	4.5	148
88	Association of XRCC1 and tyrosyl DNA phosphodiesterase (Tdp1) for the repair of topoisomerase I-mediated DNA lesions. DNA Repair, 2003, 2, 1087-1100.	1.3	181
89	XRCC1 and DNA strand break repair. DNA Repair, 2003, 2, 955-969.	1.3	524
90	A requirement for PARP-1 for the assembly or stability of XRCC1 nuclear foci at sites of oxidative DNA damage. Nucleic Acids Research, 2003, 31, 5526-5533.	6.5	549

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91	Quantitation of intracellular NAD(P)H can monitor an imbalance of DNA single strand break repair in base excision repair deficient cells in real time. Nucleic Acids Research, 2003, 31, 104e-104.	6.5	60
92	CELL SIGNALING: The BRCT Domain: Signaling with Friends?. Science, 2003, 302, 579-580.	6.0	32
93	Central Role for the XRCC1 BRCT I Domain in Mammalian DNA Single-Strand Break Repair. Molecular and Cellular Biology, 2002, 22, 2556-2563.	1.1	157
94	XRCC1 Stimulates Human Polynucleotide Kinase Activity at Damaged DNA Termini and Accelerates DNA Single-Strand Break Repair. Cell, 2001, 104, 107-117.	13.5	554
95	Mammalian DNA single-strand break repair: an X-ra(y)ted affair. BioEssays, 2001, 23, 447-455.	1.2	160
96	A Cell Cycle-Specific Requirement for the XRCC1 BRCT II Domain during Mammalian DNA Strand Break Repair. Molecular and Cellular Biology, 2000, 20, 735-740.	1.1	115
97	Role of a BRCT domain in the interaction of DNA ligase III-Î± with the DNA repair protein XRCC1. Current Biology, 1998, 8, 877-880.	1.8	97
98	Involvement of XRCC1 and DNA Ligase III Gene Products in DNA Base Excision Repair. Journal of Biological Chemistry, 1997, 272, 23970-23975.	1.6	284
99	XRCC1 Protein Interacts with One of Two Distinct Forms of DNA Ligase III. Biochemistry, 1997, 36, 5207-5211.	1.2	245
100	Characterization of the XRCC1-DNA ligase III complexin vitroand its absence from mutant hamster cells. Nucleic Acids Research, 1995, 23, 4836-4843.	6.5	274
101	Cross-sensitivity of Î³-ray-sensitive hamster mutants to cross-linking agents. Mutation Research DNA Repair, 1991, 255, 111-121.	3.8	116