# Alan E Tomkinson

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 79 papers | 6,283 citations | 87888 38 h-index | 69250 77 g-index |
| 80 all docs | 80 docs citations | 80 times ranked | 5102 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | AP Endonuclease-Independent DNA Base Excision Repair in Human Cells. Molecular Cell, 2004, 15, 209-220. | 9.7 | 434 |
| 2 | Human DNA ligase I completely encircles and partially unwinds nicked DNA. Nature, 2004, 432, 473-478. | 27.8 | 293 |
| 3 | Eukaryotic DNA Ligases: Structural and Functional Insights. Annual Review of Biochemistry, 2008, 77, 313-338. | 11.1 | 288 |
| 4 | Chromosomal Translocations in Human Cells Are Generated by Canonical Nonhomologous End-Joining. Molecular Cell, 2014, 55, 829-842. | 9.7 | 278 |
| 5 | Promotion of Dnl4-Catalyzed DNA End-Joining by the Rad50/Mre11/Xrs2 and Hdf1/Hdf2 Complexes. Molecular Cell, 2001, 8, 1105-1115. | 9.7 | 276 |
| 6 | Mutations in the DNA ligase I gene of an individual with immunodeficiencies and cellular hypersensitivity to DNA-damaging agents. Cell, 1992, 69, 495-503. | 28.9 | 268 |
| 7 | Mechanism of DNA double-strand break repair by non-homologous end joining. DNA Repair, 2005, 4, 639-648. | 2.8 | 264 |
| 8 | Specific Interaction of DNA Polymerase Î² and DNA Ligase I in a Multiprotein Base Excision Repair Complex from Bovine Testis. Journal of Biological Chemistry, 1996, 271, 16000-16007. | 3.4 | 242 |
| 9 | Interaction between PCNA and DNA ligase I is critical for joining of Okazaki fragments and long-patch base-excision repair. Current Biology, 2000, 10, 919-S2. | 3.9 | 218 |
| 10 | Physical and Functional Interaction between DNA Ligase IIIÎ± and Poly(ADP-Ribose) Polymerase 1 in DNA Single-Strand Break Repair. Molecular and Cellular Biology, 2003, 23, 5919-5927. | 2.3 | 207 |
| 11 | Interactions of the DNA Ligase IV-XRCC4 Complex with DNA Ends and the DNA-dependent Protein Kinase. Journal of Biological Chemistry, 2000, 275, 26196-26205. | 3.4 | 193 |
| 12 | Repair of DNA double-strand breaks by mammalian alternative end-joining pathways. Journal of Biological Chemistry, 2018, 293, 10536-10546. | 3.4 | 174 |
| 13 | XRCC1 co-localizes and physically interacts with PCNA. Nucleic Acids Research, 2004, 32, 2193-2201. | 14.5 | 172 |
| 14 | Rational Design of Human DNA Ligase Inhibitors that Target Cellular DNA Replication and Repair. Cancer Research, 2008, 68, 3169-3177. | 0.9 | 151 |
| 15 | A Flexible Interface between DNA Ligase and PCNA Supports Conformational Switching and Efficient Ligation of DNA. Molecular Cell, 2006, 24, 279-291. | 9.7 | 142 |
| 16 | Mutant FUS causes DNA ligation defects to inhibit oxidative damage repair in Amyotrophic Lateral Sclerosis. Nature Communications, 2018, 9, 3683. | 12.8 | 141 |
| 17 | Up-regulation of WRN and DNA ligase IIIÎ± in chronic myeloid leukemia: consequences for the repair of DNA double-strand breaks. Blood, 2008, 112, 1413-1423. | 1.4 | 134 |
| 18 | NEIL2-initiated, APE-independent repair of oxidized bases in DNA: Evidence for a repair complex in human cells. DNA Repair, 2006, 5, 1439-1448. | 2.8 | 127 |

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|---|---|---|---|
| 19 | Role of Dnl4â€“Lif1 in nonhomologous end-joining repair complex assembly and suppression of homologous recombination. Nature Structural and Molecular Biology, 2007, 14, 639-646. | 8.2 | 118 |
| 20 | Human Mre11/Human Rad50/Nbs1 and DNA Ligase IIIÎ±/XRCC1 Protein Complexes Act Together in an Alternative Nonhomologous End Joining Pathway. Journal of Biological Chemistry, 2011, 286, 33845-33853. | 3.4 | 113 |
| 21 | A Physical and Functional Interaction between Yeast Pol4 and Dnl4-Lif1 Links DNA Synthesis and Ligation in Nonhomologous End Joining. Journal of Biological Chemistry, 2002, 277, 45630-45637. | 3.4 | 98 |
| 22 | Completion of base excision repair by mammalian DNA ligases. Progress in Molecular Biology and Translational Science, 2001, 68, 151-164. | 1.9 | 94 |
| 23 | DNA Ligase III Is Recruited to DNA Strand Breaks by a Zinc Finger Motif Homologous to That of Poly(ADP-ribose) Polymerase. Journal of Biological Chemistry, 1999, 274, 21679-21687. | 3.4 | 90 |
| 24 | Human DNA Ligase III Recognizes DNA Ends by Dynamic Switching between Two DNA-Bound States. Biochemistry, 2010, 49, 6165-6176. | 2.5 | 90 |
| 25 | Structural basis of long-range to short-range synaptic transition in NHEJ. Nature, 2021, 593, 294-298. | 27.8 | 89 |
| 26 | Physical and Functional Interaction between the XPF/ERCC1 Endonuclease and hRad52. Journal of Biological Chemistry, 2004, 279, 13634-13639. | 3.4 | 86 |
| 27 | Targeting Abnormal DNA Repair in Therapy-Resistant Breast Cancers. Molecular Cancer Research, 2012, 10, 96-107. | 3.4 | 80 |
| 28 | Identification and Validation of Human DNA Ligase Inhibitors Using Computer-Aided Drug Design. Journal of Medicinal Chemistry, 2008, 51, 4553-4562. | 6.4 | 71 |
| 29 | Purification and Characterization of DNA Ligase III from Bovine Testes. Journal of Biological Chemistry, 1995, 270, 9683-9690. | 3.4 | 69 |
| 30 | Thermodynamics of Human DNA Ligase I Trimerization and Association with DNA Polymerase Î². Journal of Biological Chemistry, 1998, 273, 20540-20550. | 3.4 | 67 |
| 31 | An Intrinsically Disordered APLF Links Ku, DNA-PKcs, and XRCC4-DNA Ligase IV in an Extended Flexible Non-homologous End Joining Complex. Journal of Biological Chemistry, 2016, 291, 26987-27006. | 3.4 | 61 |
| 32 | SCR7 is neither a selective nor a potent inhibitor of human DNA ligase IV. DNA Repair, 2016, 43, 18-23. | 2.8 | 57 |
| 33 | A Conserved Interaction between the Replicative Clamp Loader and DNA Ligase in Eukaryotes. Journal of Biological Chemistry, 2004, 279, 55196-55201. | 3.4 | 50 |
| 34 | Two DNA-binding and Nick Recognition Modules in Human DNA Ligase III. Journal of Biological Chemistry, 2008, 283, 10764-10772. | 3.4 | 49 |
| 35 | Processing and Joining of DNA Ends Coordinated by Interactions among Dnl4/Lif1, Pol4, and FEN-1. Journal of Biological Chemistry, 2004, 279, 47580-47588. | 3.4 | 48 |
| 36 | Structure and function of the DNA ligases encoded by the mammalian LIG3 gene. Gene, 2013, 531, 150-157. | 2.2 | 48 |

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| 37 | DNA Ligase I, the Replicative DNA Ligase. Sub-Cellular Biochemistry, 2012, 62, 327-341. | 2.4 | 48 |
| 38 | Translocation of XRCC1 and DNA ligase IIIÂ from centrosomes to chromosomes in response to DNA damage in mitotic human cells. Nucleic Acids Research, 2005, 33, 422-429. | 14.5 | 45 |
| 39 | Yeast Nej1 Is a Key Participant in the Initial End Binding and Final Ligation Steps of Nonhomologous End Joining. Journal of Biological Chemistry, 2011, 286, 4931-4940. | 3.4 | 42 |
| 40 | The C-terminal Domain (CTD) of Human DNA Glycosylase NEIL1 Is Required for Forming BERosome Repair Complex with DNA Replication Proteins at the Replicating Genome. Journal of Biological Chemistry, 2015, 290, 20919-20933. | 3.4 | 41 |
| 41 | CTG/CAG Repeat Instability Is Modulated by the Levels of Human DNA Ligase I and Its Interaction with Proliferating Cell Nuclear Antigen. Journal of Biological Chemistry, 2009, 284, 26631-26645. | 3.4 | 36 |
| 42 | The Nucleotide Sequence, DNA Damage Location, and Protein Stoichiometry Influence the Base Excision Repair Outcome at CAG/CTG Repeats. Biochemistry, 2012, 51, 3919-3932. | 2.5 | 36 |
| 43 | XRCC1 promotes replication restart, nascent fork degradation and mutagenic DNA repair in BRCA2-deficient cells. NAR Cancer, 2020, 2, zcaa013. | 3.1 | 36 |
| 44 | Genetic Instability Induced by Overexpression of DNA Ligase I in Budding Yeast. Genetics, 2005, 171, 427-441. | 2.9 | 35 |
| 45 | The SWI/SNF ATP-dependent nucleosome remodeler promotes resection initiation at a DNA double-strand break in yeast. Nucleic Acids Research, 2017, 45, 5887-5900. | 14.5 | 33 |
| 46 | Human DNA Ligases I, III, and IVâ€"Purification and New Specific Assays for These Enzymes. Methods in Enzymology, 2006, 409, 39-52. | 1.0 | 32 |
| 47 | The Interaction between Polynucleotide Kinase Phosphatase and the DNA Repair Protein XRCC1 Is Critical for Repair of DNA Alkylation Damage and Stable Association at DNA Damage Sites. Journal of Biological Chemistry, 2012, 287, 39233-39244. | 3.4 | 29 |
| 48 | The Human Ligase IIIÎ±-XRCC1 Protein Complex Performs DNA Nick Repair after Transient Unwrapping of Nucleosomal DNA. Journal of Biological Chemistry, 2017, 292, 5227-5238. | 3.4 | 29 |
| 49 | Reduced repair of DNA double-strand breaks by homologous recombination in a DNA ligase I-deficient human cell line. DNA Repair, 2005, 4, 649-654. | 2.8 | 28 |
| 50 | Phosphorylation of Human DNA Ligase I Regulates Its Interaction with Replication Factor C and Its Participation in DNA Replication and DNA Repair. Molecular and Cellular Biology, 2009, 29, 2042-2052. | 2.3 | 28 |
| 51 | Ubiquitin-specific Peptidase 20 Regulates Rad17 Stability, Checkpoint Kinase 1 Phosphorylation and DNA Repair by Homologous Recombination. Journal of Biological Chemistry, 2014, 289, 22739-22748. | 3.4 | 28 |
| 52 | DNA ligases as therapeutic targets. Translational Cancer Research, 2013, 2, . | 1.0 | 28 |
| 53 | Distinct kinetics of human DNA ligases I, IIIÎ±, IIIÎ², and IV reveal direct DNA sensing ability and differential physiological functions in DNA repair. DNA Repair, 2009, 8, 961-968. | 2.8 | 26 |
| 54 | Human DNA ligases in replication and repair. DNA Repair, 2020, 93, 102908. | 2.8 | 26 |

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| 55 | Human DNA ligase III bridges two DNA ends to promote specific intermolecular DNA end joining. Nucleic Acids Research, 2015, 43, 7021-7031. | 14.5 | 25 |
| 56 | Absence of MutSÎ² leads to the formation of slipped-DNA for CTG/CAG contractions at primate replication forks. DNA Repair, 2016, 42, 107-118. | 2.8 | 23 |
| 57 | The DNA binding domain of human DNA ligase I interacts with both nicked DNA and the DNA sliding clamps, PCNA and hRad9-hRad1-hHus1. DNA Repair, 2009, 8, 912-919. | 2.8 | 21 |
| 58 | An atypical BRCTâ€“BRCT interaction with the XRCC1 scaffold protein compacts human DNA Ligase IIIÎ± within a flexible DNA repair complex. Nucleic Acids Research, 2021, 49, 306-321. | 14.5 | 21 |
| 59 | A Conserved Physical and Functional Interaction between the Cell Cycle Checkpoint Clamp Loader and DNA Ligase I of Eukaryotes. Journal of Biological Chemistry, 2007, 282, 22721-22730. | 3.4 | 20 |
| 60 | Inhibiting Mitochondrial DNA Ligase IIIÎ± Activates Caspase 1â€“Dependent Apoptosis in Cancer Cells. Cancer Research, 2016, 76, 5431-5441. | 0.9 | 20 |
| 61 | Aromatase Inhibitorâ€“Mediated Downregulation of INrf2 (Keap1) Leads to Increased Nrf2 and Resistance in Breast Cancer. Molecular Cancer Therapeutics, 2015, 14, 1728-1737. | 4.1 | 17 |
| 62 | Human DNA Ligase I Interacts with and Is Targeted for Degradation by the DCAF7 Specificity Factor of the Cul4-DDB1 Ubiquitin Ligase Complex. Journal of Biological Chemistry, 2016, 291, 21893-21902. | 3.4 | 17 |
| 63 | Structure-activity relationships among DNA ligase inhibitors: Characterization of a selective uncompetitive DNA ligase I inhibitor. DNA Repair, 2017, 60, 29-39. | 2.8 | 17 |
| 64 | Altered DNA ligase activity in human disease. Mutagenesis, 2020, 35, 51-60. | 2.6 | 17 |
| 65 | Role of the yeast DNA repair protein Nej1 in end processing during the repair of DNA double strand breaks by non-homologous end joining. DNA Repair, 2015, 31, 1-10. | 2.8 | 16 |
| 66 | A High-Throughput Scintillation Proximity-Based Assay for Human DNA Ligase IV. Assay and Drug Development Technologies, 2012, 10, 235-249. | 1.2 | 14 |
| 67 | Phosphorylation of Serine 51 Regulates the Interaction of Human DNA Ligase I with Replication Factor C and Its Participation in DNA Replication and Repair*. Journal of Biological Chemistry, 2012, 287, 36711-36719. | 3.4 | 12 |
| 68 | Dynamic DNA-bound PCNA complexes co-ordinate Okazaki fragment synthesis, processing and ligation. Journal of Molecular Biology, 2020, 432, 166698. | 4.2 | 11 |
| 69 | Ligase 1 is a predictor of platinum resistance and its blockade is synthetically lethal in XRCC1 deficient epithelial ovarian cancers. Theranostics, 2021, 11, 8350-8361. | 10.0 | 10 |
| 70 | Optimization of Native and Formaldehyde iPOND Techniques for Use in Suspension Cells. Methods in Enzymology, 2017, 591, 1-32. | 1.0 | 8 |
| 71 | POLD1 variants leading to reduced polymerase activity can cause hearing loss without syndromic features. Human Mutation, 2020, 41, 913-920. | 2.5 | 7 |
| 72 | Synthesis and structure determination of SCR7, a DNA ligase inhibitor. Tetrahedron Letters, 2016, 57, 3204-3207. | 1.4 | 6 |

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| 73 | Direct interaction of DNA repair protein tyrosyl DNA phosphodiesterase 1 and the DNA ligase III catalytic domain is regulated by phosphorylation of its flexible N-terminus. Journal of Biological Chemistry, 2021, 297, 100921. | 3.4 | 6 |
| 74 | Cryo-EM structures and biochemical insights into heterotrimeric PCNA regulation of DNA ligase. Structure, 2022, 30, 371-385.e5. | 3.3 | 5 |
| 75 | NAD+ is not utilized as a co-factor for DNA ligation by human DNA ligase IV. Nucleic Acids Research, 2020, 48, 12746-12750. | 14.5 | 2 |
| 76 | 1HN, 13C, and 15N backbone resonance assignments of the human DNA ligase 3 DNA-binding domain (residues 257-477). Biomolecular NMR Assignments, 2019, 13, 305-308. | 0.8 | 1 |
| 77 | Synergistic enhancement of 5-fluorouracil cytotoxicity by deoxyuridine analogs in cancer cells. Oncoscience, 2015, 2, 272-284. | 2.2 | 1 |
| 78 | <scp>SUMO</scp> ning the base excision repair machinery for differentiation. EMBO Journal, 2019, 38, . | 7.8 | 0 |
| 79 | Purification and Characterization of Human DNA Ligase IIIÎ± Complexes After Expression in Insect Cells. Methods in Molecular Biology, 2022, 2444, 243-269. | 0.9 | 0 |