Myron F Goodman

List of Publications by Year
in descending order

127 papers	12,229 citations	38742 50 h-index	25787 108 g-index
129 all docs	129 docs citations	129 times ranked	6483 citing authors

#	Article	IF	Citations
1	The importance of repairing stalled replication forks. Nature, 2000, 404, 37-41.	27.8	1,008
2	The Y-Family of DNA Polymerases. Molecular Cell, 2001, 8, 7-8.	9.7	798
3	Fidelity Mechanisms in DNA Replication. Annual Review of Biochemistry, 1991, 60, 477-511.	11.1	714
4	Error-Prone Repair DNA Polymerases in Prokaryotes and Eukaryotes. Annual Review of Biochemistry, 2002, 71, 17-50.	11.1	679
5	Activation-induced cytidine deaminase deaminates deoxycytidine on single-stranded DNA but requires the action of RNase. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4102-4107.	7.1	619
6	Processive AID-catalysed cytosine deamination on single-stranded DNA simulates somatic hypermutation. Nature, 2003, 424, 103-107.	27.8	591
7	Biochemical Basis of DNA Replication Fidelity. Critical Reviews in Biochemistry and Molecular Biology, 1993, 28, 83-126.	5.2	428
8	Roles of E. coli DNA polymerases IV and V in lesion-targeted and untargeted SOS mutagenesis. Nature, 2000, 404, 1014-1018.	27.8	415
9	The Biochemistry of Somatic Hypermutation. Annual Review of Immunology, 2008, 26, 481-511.	21.8	404
10	APOBEC3G DNA deaminase acts processively 3â€² â†' 5â€² on single-stranded DNA. Nature Structural and Molecular Biology, 2006, 13, 392-399.	8.2	263
11	Translesion DNA Polymerases. Cold Spring Harbor Perspectives in Biology, 2013, 5, a010363-a010363.	5.5	229
12	[19] Gel fidelity assay measuring nucleotide misinsertion, exonucleolytic proofreading, and lesion bypass efficiencies. Methods in Enzymology, 1995, 262, 232-256.	1.0	218
13	Crystal structure of the anti-viral APOBEC3G catalytic domain and functional implications. Nature, 2008, 456, 121-124.	27.8	213
14	The APOBEC-2 crystal structure and functional implications for the deaminase AID. Nature, 2007, 445, 447-451.	27.8	191
15	SOS-induced DNA polymerases enhance long-term survival and evolutionary fitness. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 8737-8741.	7.1	180
16	Spectroscopic and Calorimetric Characterizations of DNA Duplexes Containing 2-Aminopurineâ€. Biochemistry, 1996, 35, 12329-12337.	2.5	172
17	Crystal structure of a DinB family error-prone DNA polymerase from Sulfolobus solfataricus. Nature Structural Biology, 2001, 8, 984-989.	9.7	165
18	The expanding polymerase universe. Nature Reviews Molecular Cell Biology, 2000, 1, 101-109.	37.0	152

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19	Computer Simulation of the Chemical Catalysis of DNA Polymerases:â€‰ Discriminating between Alternative Nucleotide Insertion Mechanisms for T7 DNA Polymerase. Journal of the American Chemical Society, 2003, 125, 8163-8177.	13.7	145
20	Biochemical Analysis of Hypermutational Targeting by Wild Type and Mutant Activation-induced Cytidine Deaminase. Journal of Biological Chemistry, 2004, 279, 51612-51621.	3.4	138
21	The active form of DNA polymerase V is UmuDâ€²2Câ€“RecAâ€“ATP. Nature, 2009, 460, 359-363.	27.8	132
22	A new model for SOS-induced mutagenesis: how RecA protein activates DNA polymerase V. Critical Reviews in Biochemistry and Molecular Biology, 2010, 45, 171-184.	5.2	129
23	Pre-Steady-State Kinetic Analysis of Sequence-Dependent Nucleotide Excision by the 3'-Exonuclease Activity of Bacteriophage T4 DNA Polymerase. Biochemistry, 1994, 33, 7576-7586.	2.5	121
24	Fidelity of Escherichia coli DNA Polymerase III Holoenzyme. Journal of Biological Chemistry, 1997, 272, 27919-27930.	3.4	117
25	A model for SOS-lesion-targeted mutations in Escherichia coli. Nature, 2001, 409, 366-370.	27.8	114
26	Structural Model for Deoxycytidine Deamination Mechanisms of the HIV-1 Inactivation Enzyme APOBEC3G. Journal of Biological Chemistry, 2010, 285, 16195-16205.	3.4	114
27	Stability of intrastrand hairpin structures formed by the CAG/CTG class of DNA triplet repeats associated with neurological diseases. Nucleic Acids Research, 1996, 24, 1992-1998.	14.5	113
28	Mutation induced by DNA damage: a many protein affair. Mutation Research DNA Repair, 1990, 236, 301-311.	3.7	111
29	DNA Polymerase Fidelity: From Genetics Toward a Biochemical Understanding. Genetics, 1998, 148, 1475-1482.	2.9	110
30	Competitive processivity-clamp usage by DNA polymerases during DNA replication and repair. EMBO Journal, 2003, 22, 6408-6418.	7.8	106
31	Purification of a Soluble UmuDâ€²C Complex from Escherichia coli. Journal of Biological Chemistry, 1996, 271, 10767-10774.	3.4	105
32	Computer simulations of protein functions: Searching for the molecular origin of the replication fidelity of DNA polymerases. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6819-6824.	7.1	103
33	Modifying the Î²,Î³ Leaving-Group Bridging Oxygen Alters Nucleotide Incorporation Efficiency, Fidelity, and the Catalytic Mechanism of DNA Polymerase Î²â€. Biochemistry, 2007, 46, 461-471.	2.5	99
34	DNA Polymerase V and RecA Protein, a Minimal Mutasome. Molecular Cell, 2005, 17, 561-572.	9.7	98
35	RecA acts in trans to allow replication of damaged DNA by DNA polymerase V. Nature, 2006, 442, 883-887.	27.8	97
36	Enthalpy-Entropy Compensation in DNA Melting Thermodynamics. Journal of Biological Chemistry, 1995, 270, 746-750.	3.4	96

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37	Lessons from 50 years of SOS DNA-damage-induced mutagenesis. Nature Reviews Molecular Cell Biology, 2007, 8, 587-594.	37.0	95
38	A Model for Oligomeric Regulation of APOBEC3G Cytosine Deaminase-dependent Restriction of HIV. Journal of Biological Chemistry, 2008, 283, 13780-13791.	3.4	90
39	Regulation of Mutagenic DNA Polymerase V Activation in Space and Time. PLoS Genetics, 2015, 11, e1005482.	3.5	86
40	DNA Polymerase Î² Fidelity:â€‰ Halomethylene-Modified Leaving Groups in Pre-Steady-State Kinetic Analysis Reveal Differences at the Chemical Transition State. Biochemistry, 2008, 47, 870-879.	2.5	79
41	Laserâ€induced rate processes in gases: Dynamics of polyatomic systems. Journal of Chemical Physics, 1976, 65, 5052-5061.	3.0	76
42	Methylation protects cytidines from AID-mediated deamination. Molecular Immunology, 2005, 42, 599-604.	2.2	71
43	Reward versus Risk:Â DNA Cytidine Deaminases Triggering Immunity and Diseaseâ€. Biochemistry, 2005, 44, 2703-2715.	2.5	69
44	Roles of DNA Polymerase V and RecA Protein in SOS Damage-Induced Mutation. Chemical Reviews, 2006, 106, 406-419.	47.7	68
45	A model for laser isotope separation in SF6. Journal of Chemical Physics, 1976, 65, 5062-5067.	3.0	63
46	Error-Prone Candidates Vie for Somatic Mutation. Journal of Experimental Medicine, 2000, 192, F27-F30.	8.5	63
47	Overlapping hotspots in CDRs are critical sites for V region diversification. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E728-37.	7.1	62
48	Molecular Mechanism and Energetics of Clamp Assembly inEscherichia coli. Journal of Biological Chemistry, 2000, 275, 28413-28420.	3.4	57
49	DNA polymerase IV primarily operates outside of DNA replication forks in Escherichia coli. PLoS Genetics, 2018, 14, e1007161.	3.5	55
50	(R)-Î²,Î³-Fluoromethylene-dGTP-DNA Ternary Complex with DNA Polymerase Î². Journal of the American Chemical Society, 2007, 129, 15412-15413.	13.7	54
51	Single-stranded DNA Scanning and Deamination by APOBEC3G Cytidine Deaminase at Single Molecule Resolution. Journal of Biological Chemistry, 2012, 287, 15826-15835.	3.4	53
52	GANP-mediated Recruitment of Activation-induced Cytidine Deaminase to Cell Nuclei and to Immunoglobulin Variable Region DNA. Journal of Biological Chemistry, 2010, 285, 23945-23953.	3.4	52
53	Two distinct modes of RecA action are required for DNA polymerase V-catalyzed translesion synthesis. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 11061-11066.	7.1	51
54	Replication Bypass of Interstrand Cross-link Intermediates by Escherichia coli DNA Polymerase IV. Journal of Biological Chemistry, 2008, 283, 27433-27437.	3.4	49

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55	Insights into the complex levels of regulation imposed on Escherichia coli DNA polymerase V. DNA Repair, 2016, 44, 42-50.	2.8	49
56	Halogenated Î²,Î³-Methylene- and Ethylidene-dGTP-DNA Ternary Complexes with DNA Polymerase Î²: Structural Evidence for Stereospecific Binding of the Fluoromethylene Analogues. Journal of the American Chemical Society, 2010, 132, 7617-7625.	13.7	48
57	Dissecting APOBEC3G Substrate Specificity by Nucleoside Analog Interference. Journal of Biological Chemistry, 2009, 284, 7047-7058.	3.4	46
58	DNA Polymerase Fidelity: Comparing Direct Competition of Right and Wrong dNTP Substrates with Steady State and Pre-Steady State Kinetics. Biochemistry, 2010, 49, 20-28.	2.5	45
59	Stochastic properties of processive cytidine DNA deaminases AID and APOBEC3G. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 583-593.	4.0	43
60	Competitive Fitness During Feast and Famine: How SOS DNA Polymerases Influence Physiology and Evolution in<i>Escherichia coli</i>. Genetics, 2013, 194, 409-420.	2.9	43
61	Analysis of a Single-stranded DNA-scanning Process in Which Activation-induced Deoxycytidine Deaminase (AID) Deaminates C to U Haphazardly and Inefficiently to Ensure Mutational Diversity. Journal of Biological Chemistry, 2011, 286, 24931-24942.	3.4	42
62	A Biochemical Analysis Linking APOBEC3A to Disparate HIV-1 Restriction and Skin Cancer. Journal of Biological Chemistry, 2013, 288, 29294-29304.	3.4	42
63	Modulation of RecA Nucleoprotein Function by the Mutagenic UmuDâ€²C Protein Complex. Journal of Biological Chemistry, 1998, 273, 32384-32387.	3.4	41
64	Impact of Phosphorylation and Phosphorylation-null Mutants on the Activity and Deamination Specificity of Activation-induced Cytidine Deaminase. Journal of Biological Chemistry, 2008, 283, 17428-17439.	3.4	40
65	Structural analysis of the activation-induced deoxycytidine deaminase required in immunoglobulin diversification. DNA Repair, 2016, 43, 48-56.	2.8	40
66	Computer simulation studies of the fidelity of DNA polymerases. Biopolymers, 2003, 68, 286-299.	2.4	39
67	V-region mutation in vitro, in vivo, and in silico reveal the importance of the enzymatic properties of AID and the sequence environment. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8629-8634.	7.1	37
68	AIDâ€Initiated Purposeful Mutations in Immunoglobulin Genes. Advances in Immunology, 2007, 94, 127-155.	2.2	36
69	Investigating the mechanisms of ribonucleotide excision repair in Escherichia coli. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2014, 761, 21-33.	1.0	34
70	Simple and efficient purification of Escherichia coli DNA polymerase V: Cofactor requirements for optimal activity and processivity in vitro. DNA Repair, 2012, 11, 431-440.	2.8	33
71	Activation-induced deoxycytidine deaminase (AID) co-transcriptional scanning at single-molecule resolution. Nature Communications, 2015, 6, 10209.	12.8	33
72	Mutations for Worse or Better: Low-Fidelity DNA Synthesis by SOS DNA Polymerase V Is a Tightly Regulated Double-Edged Sword. Biochemistry, 2016, 55, 2309-2318.	2.5	33

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73	A RecA Protein Surface Required for Activation of DNA Polymerase V. PLoS Genetics, 2015, 11, e1005066.	3.5	32
74	Kinetic selection vs. free energy of DNA base pairing in control of polymerase fidelity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2277-85.	7.1	32
75	Molecular Dynamics Free-Energy Simulations of the Binding Contribution to the Fidelity of T7 DNA Polymerase. Journal of Physical Chemistry B, 2002, 106, 5754-5760.	2.6	31
76	Î²,Î³-CHF- and Î²,Î³-CHCl-dGTP Diastereomers: Synthesis, Discrete ³¹PÂNMR Signatures, and Absolute Configurations of New Stereochemical Probes for DNA Polymerases. Journal of the American Chemical Society, 2012, 134, 8734-8737.	13.7	31
77	RecA acts as a switch to regulate polymerase occupancy in a moving replication fork. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5410-5415.	7.1	31
78	A Structural Basis for the Biochemical Behavior of Activation-induced Deoxycytidine Deaminase Class-switch Recombination-defective Hyper-IgM-2 Mutants. Journal of Biological Chemistry, 2012, 287, 28007-28016.	3.4	29
79	Preferential D-loop extension by a translesion DNA polymerase underlies error-prone recombination. Nature Structural and Molecular Biology, 2013, 20, 748-755.	8.2	29
80	Transition State in DNA Polymerase Î² Catalysis: Rate-Limiting Chemistry Altered by Base-Pair Configuration. Biochemistry, 2014, 53, 1842-1848.	2.5	29
81	DNA deaminases AID and APOBEC3G act processively on single-stranded DNA. DNA Repair, 2007, 6, 689-692.	2.8	25
82	DNA polymerase Î² catalytic efficiency mirrors the Asn279-dCTP H-bonding strength. FEBS Letters, 2007, 581, 775-780.	2.8	25
83	Mechanisms of APOBEC3G-catalyzed processive deamination of deoxycytidine on single-stranded DNA. Nature Structural and Molecular Biology, 2009, 16, 454-455.	8.2	25
84	A Mathematical Model for Scanning and Catalysis on Single-stranded DNA, Illustrated with Activation-induced Deoxycytidine Deaminase. Journal of Biological Chemistry, 2013, 288, 29786-29795.	3.4	25
85	Analysis of mutational changes at the HLA locus in single human sperm. Human Mutation, 1995, 6, 303-310.	2.5	24
86	AID and Apobec3G haphazard deamination and mutational diversity. Cellular and Molecular Life Sciences, 2013, 70, 3089-3108.	5.4	23
87	AIDâ€“RNA polymerase II transcription-dependent deamination of IgV DNA. Nucleic Acids Research, 2019, 47, 10815-10829.	14.5	23
88	Asymmetry in forming 2-aminopurine Â· hydroxymethylcytosine heteroduplexes; a model giving misincorporation frequencies and rounds of DNA replication from base-pair populations in vivo. Journal of Molecular Biology, 1979, 135, 1-22.	4.2	22
89	A Computational Study of the Hydrolysis of dGTP Analogues with Halomethylene-Modified Leaving Groups in Solution: Implications for the Mechanism of DNA Polymerases. Biochemistry, 2009, 48, 5963-5971.	2.5	22
90	DNA polymerases are error-prone at RecA-mediated recombination intermediates. Cell Cycle, 2013, 12, 2558-2563.	2.6	22

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91	DNA polymerase V activity is autoregulated by a novel intrinsic DNA-dependent ATPase. ELife, 2014, 3, e02384.	6.0	22
92	Escherichia coli DNA Polymerase V Subunit Exchange. Journal of Biological Chemistry, 2003, 278, 52546-52550.	3.4	20
93	Probing DNA Base-Dependent Leaving Group Kinetic Effects on the DNA Polymerase Transition State. Biochemistry, 2018, 57, 3925-3933.	2.5	18
94	Effect of Î²,Î³-CHF- and Î²,Î³-CHCl-dGTP Halogen Atom Stereochemistry on the Transition State of DNA Polymerase Î². Biochemistry, 2012, 51, 8491-8501.	2.5	17
95	A Change in the Rate-Determining Step of Polymerization by the K289M DNA Polymerase Î² Cancer-Associated Variant. Biochemistry, 2017, 56, 2096-2105.	2.5	16
96	Conformational regulation of Escherichia coli DNA polymerase V by RecA and ATP. PLoS Genetics, 2019, 15, e1007956.	3.5	16
97	Biochemical Basis of Immunological and Retroviral Responses to DNA-targeted Cytosine Deamination by Activation-induced Cytidine Deaminase and APOBEC3G. Journal of Biological Chemistry, 2009, 284, 27761-27765.	3.4	15
98	Better living with hyperâ€mutation. Environmental and Molecular Mutagenesis, 2016, 57, 421-434.	2.2	15
99	Activation-induced deoxycytidine deaminase: Structural basis for favoring WRC hot motif specificities unique among APOBEC family members. DNA Repair, 2017, 54, 8-12.	2.8	15
100	Single-molecule live-cell imaging reveals RecB-dependent function of DNA polymerase IV inÂdouble strand break repair. Nucleic Acids Research, 2020, 48, 8490-8508.	14.5	15
101	Purposeful mutations. Nature, 1998, 395, 221-223.	27.8	14
102	Engineering processive DNA polymerases with maximum benefit at minimum cost. Frontiers in Microbiology, 2014, 5, 380.	3.5	14
103	First AID (Activation-induced Cytidine Deaminase) Is Needed to Produce High Affinity Isotype-switched Antibodies. Journal of Biological Chemistry, 2006, 281, 16833-16836.	3.4	13
104	Hypermutation at A/T Sites during GÂ·U Mismatch Repair in Vitro by Human B-cell Lysates. Journal of Biological Chemistry, 2008, 283, 31754-31762.	3.4	13
105	The Discovery of Error-prone DNA Polymerase V and Its Unique Regulation by RecA and ATP. Journal of Biological Chemistry, 2014, 289, 26772-26782.	3.4	13
106	Preparation of Imino and Amino N-15 Enriched 2-Aminopurine Deoxynucleoside. Nucleosides & Nucleotides, 1989, 8, 23-34.	0.5	11
107	Mapping Functional Substrateâ€"Enzyme Interactions in the pol Î² Active Site through Chemical Biology: Structural Responses to Acidity Modification of Incoming dNTPs. Biochemistry, 2018, 57, 3934-3944.	2.5	11
108	A Transition-State Perspective on Y-Family DNA Polymerase Î· Fidelity in Comparison with X-Family DNA Polymerases Î» and Î². Biochemistry, 2019, 58, 1764-1773.	2.5	10

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109	Genomic landscape of single-stranded DNA gapped intermediates in<i>Escherichia coli</i>. Nucleic Acids Research, 2022, 50, 937-951.	14.5	10
110	GANP Interacts with APOBEC3G and Facilitates Its Encapsidation into the Virions To Reduce HIV-1 Infectivity. Journal of Immunology, 2013, 191, 6030-6039.	0.8	7
111	Random-walk enzymes. Physical Review E, 2015, 92, 032717.	2.1	7
112	DNA Polymerase Î² Cancer-Associated Variant I260M Exhibits Nonspecific Selectivity toward the Î²â€“Î³ Bridging Group of the Incoming dNTP. Biochemistry, 2017, 56, 5449-5456.	2.5	7
113	Role of RNase H enzymes in maintaining genome stability in Escherichia coli expressing a steric-gate mutant of pol VICE391. DNA Repair, 2019, 84, 102685.	2.8	7
114	The mRNA tether model for activation-induced deaminase and its relevance for Ig somatic hypermutation and class switch recombination. DNA Repair, 2022, 110, 103271.	2.8	7
115	Identifying proteinâ€“protein interactions in somatic hypermutation. Journal of Experimental Medicine, 2005, 201, 493-496.	8.5	5
116	A sliding clamp monkey wrench. , 2001, 8, 829-831.		4
117	Tomas Lindahl: 2015 Nobel Laureate. DNA Repair, 2016, 37, A29-A34.	2.8	4
118	Relating DNA base-pairing in aqueous media to DNA polymerase fidelity. Nature Reviews Chemistry, 2017, 1, .	30.2	4
119	A pre-catalytic non-covalent step governs DNA polymerase Î² fidelity. Nucleic Acids Research, 2019, 47, 11839-11849.	14.5	4
120	The SOS Error-Prone DNA Polymerase V Mutasome and Î²-Sliding Clamp Acting in Concert on Undamaged DNA and during Translesion Synthesis. Cells, 2021, 10, 1083.	4.1	4
121	Integrity of immunoglobulin variable regions is supported by GANP during AID-induced somatic hypermutation in germinal center B cells. International Immunology, 2017, 29, 211-220.	4.0	3
122	Random Walk Enzymes: Information Theory, Quantum Isomorphism, and Entropy Dispersion. Journal of Physical Chemistry A, 2019, 123, 3030-3037.	2.5	3
123	The prospect of APOBEC3G for the future of HIV therapy. HIV Therapy, 2009, 3, 7-10.	0.6	1
124	An accidental biochemist. DNA Repair, 2012, 11, 527-536.	2.8	0
125	John W. (Jan) Drake: A Biochemical View of a Geneticist Par Excellence. Genetics, 2020, 216, 827-836.	2.9	0
126	Revealing an Internal Stabilization Deficiency in the DNA Polymerase Î² K289M Cancer Variant through the Combined Use of Chemical Biology and X-ray Crystallography. Biochemistry, 2020, 59, 955-963.	2.5	0

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127	Mutations for Worse or Better: Low Fidelity DNA Synthesis by SOS DNA Polymerase V is a Tightlyâ€Regulated Doubleâ€Edged Sword. FASEB Journal, 2015, 29, .	0.5	0