Myron F Goodman

List of Publications by Year
in descending order

127 papers	12,229 citations	44444 50 h-index	29333 108 g-index
129 all docs	129 docs citations	129 times ranked	7298 citing authors

#	Article	IF	Citations
1	The mRNA tether model for activation-induced deaminase and its relevance for Ig somatic hypermutation and class switch recombination. DNA Repair, 2022, 110, 103271.	1.3	7
2	Genomic landscape of single-stranded DNA gapped intermediates in<i>Escherichia coli</i>. Nucleic Acids Research, 2022, 50, 937-951.	6.5	10
3	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.	1.8	4
4	Single-molecule live-cell imaging reveals RecB-dependent function of DNA polymerase IV inÂdouble strand break repair. Nucleic Acids Research, 2020, 48, 8490-8508.	6.5	15
5	John W. (Jan) Drake: A Biochemical View of a Geneticist Par Excellence. Genetics, 2020, 216, 827-836.	1.2	0
6	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.	1.2	0
7	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.	1.3	7
8	AIDâ€“RNA polymerase II transcription-dependent deamination of IgV DNA. Nucleic Acids Research, 2019, 47, 10815-10829.	6.5	23
9	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.	1.2	10
10	Random Walk Enzymes: Information Theory, Quantum Isomorphism, and Entropy Dispersion. Journal of Physical Chemistry A, 2019, 123, 3030-3037.	1.1	3
11	Conformational regulation of Escherichia coli DNA polymerase V by RecA and ATP. PLoS Genetics, 2019, 15, e1007956.	1.5	16
12	A pre-catalytic non-covalent step governs DNA polymerase Î² fidelity. Nucleic Acids Research, 2019, 47, 11839-11849.	6.5	4
13	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.	1.2	11
14	Probing DNA Base-Dependent Leaving Group Kinetic Effects on the DNA Polymerase Transition State. Biochemistry, 2018, 57, 3925-3933.	1.2	18
15	DNA polymerase IV primarily operates outside of DNA replication forks in Escherichia coli. PLoS Genetics, 2018, 14, e1007161.	1.5	55
16	Activation-induced deoxycytidine deaminase: Structural basis for favoring WRC hot motif specificities unique among APOBEC family members. DNA Repair, 2017, 54, 8-12.	1.3	15
17	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.	1.8	3
18	A Change in the Rate-Determining Step of Polymerization by the K289M DNA Polymerase Î² Cancer-Associated Variant. Biochemistry, 2017, 56, 2096-2105.	1.2	16

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19	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.	1.2	7
20	Relating DNA base-pairing in aqueous media to DNA polymerase fidelity. Nature Reviews Chemistry, 2017, 1, .	13.8	4
21	Better living with hyperâ€mutation. Environmental and Molecular Mutagenesis, 2016, 57, 421-434.	0.9	15
22	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.	3.3	32
23	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.	1.2	33
24	Tomas Lindahl: 2015 Nobel Laureate. DNA Repair, 2016, 37, A29-A34.	1.3	4
25	Structural analysis of the activation-induced deoxycytidine deaminase required in immunoglobulin diversification. DNA Repair, 2016, 43, 48-56.	1.3	40
26	Insights into the complex levels of regulation imposed on Escherichia coli DNA polymerase V. DNA Repair, 2016, 44, 42-50.	1.3	49
27	Random-walk enzymes. Physical Review E, 2015, 92, 032717.	0.8	7
28	Regulation of Mutagenic DNA Polymerase V Activation in Space and Time. PLoS Genetics, 2015, 11, e1005482.	1.5	86
29	Activation-induced deoxycytidine deaminase (AID) co-transcriptional scanning at single-molecule resolution. Nature Communications, 2015, 6, 10209.	5.8	33
30	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.	3.3	62
31	A RecA Protein Surface Required for Activation of DNA Polymerase V. PLoS Genetics, 2015, 11, e1005066.	1.5	32
32	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, .	0.2	0
33	DNA polymerase V activity is autoregulated by a novel intrinsic DNA-dependent ATPase. ELife, 2014, 3, e02384.	2.8	22
34	Engineering processive DNA polymerases with maximum benefit at minimum cost. Frontiers in Microbiology, 2014, 5, 380.	1.5	14
35	Transition State in DNA Polymerase Î² Catalysis: Rate-Limiting Chemistry Altered by Base-Pair Configuration. Biochemistry, 2014, 53, 1842-1848.	1.2	29
36	The Discovery of Error-prone DNA Polymerase V and Its Unique Regulation by RecA and ATP. Journal of Biological Chemistry, 2014, 289, 26772-26782.	1.6	13

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37	Investigating the mechanisms of ribonucleotide excision repair in Escherichia coli. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2014, 761, 21-33.	0.4	34
38	Preferential D-loop extension by a translesion DNA polymerase underlies error-prone recombination. Nature Structural and Molecular Biology, 2013, 20, 748-755.	3.6	29
39	Translesion DNA Polymerases. Cold Spring Harbor Perspectives in Biology, 2013, 5, a010363-a010363.	2.3	229
40	Competitive Fitness During Feast and Famine: How SOS DNA Polymerases Influence Physiology and Evolution in<i>Escherichia coli</i>. Genetics, 2013, 194, 409-420.	1.2	43
41	AID and Apobec3G haphazard deamination and mutational diversity. Cellular and Molecular Life Sciences, 2013, 70, 3089-3108.	2.4	23
42	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.	3.3	31
43	GANP Interacts with APOBEC3G and Facilitates Its Encapsidation into the Virions To Reduce HIV-1 Infectivity. Journal of Immunology, 2013, 191, 6030-6039.	0.4	7
44	A Biochemical Analysis Linking APOBEC3A to Disparate HIV-1 Restriction and Skin Cancer. Journal of Biological Chemistry, 2013, 288, 29294-29304.	1.6	42
45	DNA polymerases are error-prone at RecA-mediated recombination intermediates. Cell Cycle, 2013, 12, 2558-2563.	1.3	22
46	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.	1.6	25
47	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.	1.6	29
48	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.	1.2	17
49	Single-stranded DNA Scanning and Deamination by APOBEC3G Cytidine Deaminase at Single Molecule Resolution. Journal of Biological Chemistry, 2012, 287, 15826-15835.	1.6	53
50	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.	6.6	31
51	An accidental biochemist. DNA Repair, 2012, 11, 527-536.	1.3	0
52	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.	1.3	33
53	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.	1.6	42
54	Structural Model for Deoxycytidine Deamination Mechanisms of the HIV-1 Inactivation Enzyme APOBEC3G. Journal of Biological Chemistry, 2010, 285, 16195-16205.	1.6	114

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55	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.	1.6	52
56	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.	2.3	129
57	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.	1.2	45
58	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.	6.6	48
59	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.	1.6	15
60	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.	3.3	37
61	Dissecting APOBEC3G Substrate Specificity by Nucleoside Analog Interference. Journal of Biological Chemistry, 2009, 284, 7047-7058.	1.6	46
62	Stochastic properties of processive cytidine DNA deaminases AID and APOBEC3G. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 583-593.	1.8	43
63	The active form of DNA polymerase V is UmuDâ€²2Câ€“RecAâ€“ATP. Nature, 2009, 460, 359-363.	13.7	132
64	Mechanisms of APOBEC3G-catalyzed processive deamination of deoxycytidine on single-stranded DNA. Nature Structural and Molecular Biology, 2009, 16, 454-455.	3.6	25
65	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.	1.2	22
66	The prospect of APOBEC3G for the future of HIV therapy. HIV Therapy, 2009, 3, 7-10.	0.6	1
67	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.	1.2	79
68	The Biochemistry of Somatic Hypermutation. Annual Review of Immunology, 2008, 26, 481-511.	9.5	404
69	Crystal structure of the anti-viral APOBEC3G catalytic domain and functional implications. Nature, 2008, 456, 121-124.	13.7	213
70	A Model for Oligomeric Regulation of APOBEC3G Cytosine Deaminase-dependent Restriction of HIV. Journal of Biological Chemistry, 2008, 283, 13780-13791.	1.6	90
71	Replication Bypass of Interstrand Cross-link Intermediates by Escherichia coli DNA Polymerase IV. Journal of Biological Chemistry, 2008, 283, 27433-27437.	1.6	49
72	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.	1.6	40

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73	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.	1.6	13
74	AIDâ€Initiated Purposeful Mutations in Immunoglobulin Genes. Advances in Immunology, 2007, 94, 127-155.	1.1	36
75	DNA deaminases AID and APOBEC3G act processively on single-stranded DNA. DNA Repair, 2007, 6, 689-692.	1.3	25
76	DNA polymerase Î² catalytic efficiency mirrors the Asn279-dCTP H-bonding strength. FEBS Letters, 2007, 581, 775-780.	1.3	25
77	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.	1.2	99
78	(R)-Î²,Î³-Fluoromethylene-dGTP-DNA Ternary Complex with DNA Polymerase Î². Journal of the American Chemical Society, 2007, 129, 15412-15413.	6.6	54
79	Lessons from 50 years of SOS DNA-damage-induced mutagenesis. Nature Reviews Molecular Cell Biology, 2007, 8, 587-594.	16.1	95
80	The APOBEC-2 crystal structure and functional implications for the deaminase AID. Nature, 2007, 445, 447-451.	13.7	191
81	APOBEC3G DNA deaminase acts processively 3â€² â†' 5â€² on single-stranded DNA. Nature Structural and Molecular Biology, 2006, 13, 392-399.	3.6	263
82	RecA acts in trans to allow replication of damaged DNA by DNA polymerase V. Nature, 2006, 442, 883-887.	13.7	97
83	Roles of DNA Polymerase V and RecA Protein in SOS Damage-Induced Mutation. Chemical Reviews, 2006, 106, 406-419.	23.0	68
84	First AID (Activation-induced Cytidine Deaminase) Is Needed to Produce High Affinity Isotype-switched Antibodies. Journal of Biological Chemistry, 2006, 281, 16833-16836.	1.6	13
85	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.	3.3	103
86	Identifying proteinâ€"protein interactions in somatic hypermutation. Journal of Experimental Medicine, 2005, 201, 493-496.	4.2	5
87	Reward versus Risk:Â DNA Cytidine Deaminases Triggering Immunity and Diseaseâ€. Biochemistry, 2005, 44, 2703-2715.	1.2	69
88	DNA Polymerase V and RecA Protein, a Minimal Mutasome. Molecular Cell, 2005, 17, 561-572.	4.5	98
89	Methylation protects cytidines from AID-mediated deamination. Molecular Immunology, 2005, 42, 599-604.	1.0	71
90	Biochemical Analysis of Hypermutational Targeting by Wild Type and Mutant Activation-induced Cytidine Deaminase. Journal of Biological Chemistry, 2004, 279, 51612-51621.	1.6	138

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91	Competitive processivity-clamp usage by DNA polymerases during DNA replication and repair. EMBO Journal, 2003, 22, 6408-6418.	3.5	106
92	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.	6.6	145
93	Computer simulation studies of the fidelity of DNA polymerases. Biopolymers, 2003, 68, 286-299.	1.2	39
94	Processive AID-catalysed cytosine deamination on single-stranded DNA simulates somatic hypermutation. Nature, 2003, 424, 103-107.	13.7	591
95	Escherichia coli DNA Polymerase V Subunit Exchange. Journal of Biological Chemistry, 2003, 278, 52546-52550.	1.6	20
96	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.	3.3	619
97	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.	3.3	180
98	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.	3.3	51
99	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.	1.2	31
100	Error-Prone Repair DNA Polymerases in Prokaryotes and Eukaryotes. Annual Review of Biochemistry, 2002, 71, 17-50.	5.0	679
101	The Y-Family of DNA Polymerases. Molecular Cell, 2001, 8, 7-8.	4.5	798
102	A sliding clamp monkey wrench. , 2001, 8, 829-831.		4
103	Crystal structure of a DinB family error-prone DNA polymerase from Sulfolobus solfataricus. Nature Structural Biology, 2001, 8, 984-989.	9.7	165
104	A model for SOS-lesion-targeted mutations in Escherichia coli. Nature, 2001, 409, 366-370.	13.7	114
105	The importance of repairing stalled replication forks. Nature, 2000, 404, 37-41.	13.7	1,008
106	Roles of E. coli DNA polymerases IV and V in lesion-targeted and untargeted SOS mutagenesis. Nature, 2000, 404, 1014-1018.	13.7	415
107	The expanding polymerase universe. Nature Reviews Molecular Cell Biology, 2000, 1, 101-109.	16.1	152
108	Error-Prone Candidates Vie for Somatic Mutation. Journal of Experimental Medicine, 2000, 192, F27-F30.	4.2	63

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109	Molecular Mechanism and Energetics of Clamp Assembly inEscherichia coli. Journal of Biological Chemistry, 2000, 275, 28413-28420.	1.6	57
110	Purposeful mutations. Nature, 1998, 395, 221-223.	13.7	14
111	Modulation of RecA Nucleoprotein Function by the Mutagenic UmuDâ€²C Protein Complex. Journal of Biological Chemistry, 1998, 273, 32384-32387.	1.6	41
112	DNA Polymerase Fidelity: From Genetics Toward a Biochemical Understanding. Genetics, 1998, 148, 1475-1482.	1.2	110
113	Fidelity of Escherichia coli DNA Polymerase III Holoenzyme. Journal of Biological Chemistry, 1997, 272, 27919-27930.	1.6	117
114	Spectroscopic and Calorimetric Characterizations of DNA Duplexes Containing 2-Aminopurineâ€. Biochemistry, 1996, 35, 12329-12337.	1.2	172
115	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.	6.5	113
116	Purification of a Soluble UmuDâ€²C Complex from Escherichia coli. Journal of Biological Chemistry, 1996, 271, 10767-10774.	1.6	105
117	Analysis of mutational changes at the HLA locus in single human sperm. Human Mutation, 1995, 6, 303-310.	1.1	24
118	Enthalpy-Entropy Compensation in DNA Melting Thermodynamics. Journal of Biological Chemistry, 1995, 270, 746-750.	1.6	96
119	[19] Gel fidelity assay measuring nucleotide misinsertion, exonucleolytic proofreading, and lesion bypass efficiencies. Methods in Enzymology, 1995, 262, 232-256.	0.4	218
120	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.	1.2	121
121	Biochemical Basis of DNA Replication Fidelity. Critical Reviews in Biochemistry and Molecular Biology, 1993, 28, 83-126.	2.3	428
122	Fidelity Mechanisms in DNA Replication. Annual Review of Biochemistry, 1991, 60, 477-511.	5.0	714
123	Mutation induced by DNA damage: a many protein affair. Mutation Research DNA Repair, 1990, 236, 301-311.	3.8	111
124	Preparation of Imino and Amino N-15 Enriched 2-Aminopurine Deoxynucleoside. Nucleosides & Nucleotides, 1989, 8, 23-34.	0.5	11
125	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.	2.0	22
126	Laserâ€induced rate processes in gases: Dynamics of polyatomic systems. Journal of Chemical Physics, 1976, 65, 5052-5061.	1.2	76

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127	A model for laser isotope separation in SF6. Journal of Chemical Physics, 1976, 65, 5062-5067.	1.2	63