Penny J Beuning

List of Publications by Year
in descending order

105	1,104	393982 19	476904 29
papers	citations	h-index	g-index

105	105	105	1157
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Versatile separation of nucleotides from bacterial cell lysates using strong anion exchange chromatography. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2022, 1188, 123044.	1.2	6
2	Functional Characterization of Structural Genomics Proteins in the Crotonase Superfamily. ACS Chemical Biology, 2022, 17, 395-403.	1.6	6
3	Stereoselective Synthesis of Î²-Glycinamide Ribonucleotide. Molecules, 2022, 27, 2528.	1.7	0
4	Novel Mobile Phase to Control Charge States and Metal Adducts in the LC/MS for mRNA Characterization Assays. ACS Omega, 2022, 7, 22181-22191.	1.6	6
5	DNA repair | UmuDC Lesion Bypass DNA Polymerase V. , 2021, , 334-344.		0
6	Complete enzymatic digestion of double-stranded RNA to nucleosides enables accurate quantification of dsRNA. Analytical Methods, 2021, 13, 179-185.	1.3	3
7	DNA Recognition/Processing | DNA Polymerase III, Bacterial. , 2021, , 460-471.		0
8	NMR resonance assignments for the nucleotide binding domains of the E. coli clamp loader complex Î³ subunit. Biomolecular NMR Assignments, 2021, 15, 281-285.	0.4	0
9	Identification, Characterization and Drug Discovery for Novel Target Sites for SARSâ€CoVâ€2 Proteins. FASEB Journal, 2021, 35, .	0.2	0
10	DNA Adductomics by mass tag prelabeling. Rapid Communications in Mass Spectrometry, 2021, 35, e9095.	0.7	2
11	Adapting Undergraduate Research to Remote Work to Increase Engagement. The Biophysicist, 2021, 2, 28-32.	0.1	2
12	Multiprotein E. coli SSBâ€“ssDNA complex shows both stable binding and rapid dissociation due to interprotein interactions. Nucleic Acids Research, 2021, 49, 1532-1549.	6.5	22
13	Division of Chemical Toxicology Program at the American Chemical Society National Meeting: Celebrating 25 Years!. Chemical Research in Toxicology, 2021, 34, 2167-2168.	1.7	0
14	Jettison-MS of Nucleic Acid Species. Journal of the American Society for Mass Spectrometry, 2020, 31, 1641-1646.	1.2	2
15	Probing remote residues important for catalysis in Escherichia coli ornithine transcarbamoylase. PLoS ONE, 2020, 15, e0228487.	1.1	4
16	Mammalian DNA Polymerase Kappa Activity and Specificity. Molecules, 2019, 24, 2805.	1.7	28
17	Dynamics of the E.Âcoli Î²-Clamp Dimer Interface and Its Influence on DNA Loading. Biophysical Journal, 2019, 117, 587-601.	0.2	12
18	Engineering Polymerases for New Functions. Trends in Biotechnology, 2019, 37, 1091-1103.	4.9	28

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19	The response of Escherichia coli to the alkylating agents chloroacetaldehyde and styrene oxide. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2019, 840, 1-10.	0.9	7
20	Thinking Outside the Informatics Box: Computed Chemical Properties for Protein Function Annotation. FASEB Journal, 2019, 33, 473.5.	0.2	0
21	Characterizing the conformational dynamics for DNA loading of the Escherichia coli DNA polymerase III subunit beta clamp. FASEB Journal, 2019, 33, 776.4.	0.2	0
22	Functional classification of protein structures by local structure matching in graph representation. Protein Science, 2018, 27, 1125-1135.	3.1	8
23	Prediction of Active Site and Distal Residues in E. coli DNA Polymerase III alpha Polymerase Activity. Biochemistry, 2018, 57, 1063-1072.	1.2	16
24	Characterization of Nine Cancer-Associated Variants in Human DNA Polymerase Î¹. Chemical Research in Toxicology, 2018, 31, 697-711.	1.7	8
25	The LexAâ€regulated gene ybfE plays a role in DNA metabolism in E. coli. FASEB Journal, 2018, 32, .	0.2	0
26	Probing the role of distal residues in DinB and Pol Kappa in the extension step of DNA damage bypass. FASEB Journal, 2018, 32, 646.3.	0.2	0
27	Understanding How Distal Residues Play a Role in Parkin Activity. FASEB Journal, 2018, 32, 654.7.	0.2	0
28	Electrostatic interactions in natural enzymes: What can we learn for enzyme design?. FASEB Journal, 2018, 32, 655.26.	0.2	0
29	Singleâ€molecule mechanochemical characterization of E. coli pol III core catalytic activity. Protein Science, 2017, 26, 1413-1426.	3.1	20
30	NMR resonance assignments for the N-terminal domain of the Î´ subunit of the E. coli Î³ clamp loader complex. Biomolecular NMR Assignments, 2017, 11, 169-173.	0.4	1
31	Compound design guidelines for evading the efflux and permeation barriers of Escherichia coli with the oxazolidinone class of antibacterials: Test case for a general approach to improving whole cell Gram-negative activity. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 5310-5321.	1.0	13
32	Identification of the Dimer Exchange Interface of the Bacterial DNA Damage Response Protein UmuD. Biochemistry, 2017, 56, 4773-4785.	1.2	15
33	Human Y-Family DNA Polymerase Î¹ Is More Tolerant to Changes in Its Active Site Loop than Its Ortholog Escherichia coli DinB. Chemical Research in Toxicology, 2017, 30, 2002-2012.	1.7	5
34	Research skills and ethics: the 20-year evolution of a professional development graduate course. Analytical and Bioanalytical Chemistry, 2017, 409, 859-862.	1.9	4
35	Throwing Away the Cookbook: Implementing Course-Based Undergraduate Research Experiences (CUREs) in Chemistry. ACS Symposium Series, 2017, , 33-63.	0.5	37
36	A Professional Development Handbook for New Faculty. ACS Symposium Series, 2017, , 13-21.	0.5	0

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37	DNA Polymerases: From Molecular Mechanisms to Human Disease, a Special Issue. Chemical Research in Toxicology, 2017, 30, 1921-1921.	1.7	1
38	Altering the N-terminal arms of the polymerase manager protein UmuD modulates protein interactions. PLoS ONE, 2017, 12, e0173388.	1.1	2
39	Progress against Escherichia coli with the Oxazolidinone Class of Antibacterials: Test Case for a General Approach To Improving Whole-Cell Gram-Negative Activity. ACS Infectious Diseases, 2016, 2, 405-426.	1.8	29
40	Visualizing the Nonhomogeneous Structure of RAD51 Filaments Using Nanofluidic Channels. Langmuir, 2016, 32, 8403-8412.	1.6	11
41	Local structure based method for prediction of the biochemical function of proteins: Applications to glycoside hydrolases. Methods, 2016, 93, 51-63.	1.9	9
42	Noncognate <scp>DNA</scp> damage prevents the formation of the active conformation of the Yâ€family <scp>DNA</scp> polymerases DinB and <scp>DNA</scp> polymerase Îº. FEBS Journal, 2015, 282, 2646-2660.	2.2	12
43	Prediction of distal residue participation in enzyme catalysis. Protein Science, 2015, 24, 762-778.	3.1	23
44	Point mutations in Escherichia coli DNA pol V that confer resistance to non-cognate DNA damage also alter proteinâ€“protein interactions. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2015, 780, 1-14.	0.4	5
45	Steric gate residues of Y-family DNA polymerases DinB and pol kappa are crucial for dNTP-induced conformational change. DNA Repair, 2015, 29, 65-73.	1.3	15
46	Biochemical functional predictions for protein structures of unknown or uncertain function. Computational and Structural Biotechnology Journal, 2015, 13, 182-191.	1.9	77
47	Remote Residues Affect Stability of Ornithine Transcarbamylase. FASEB Journal, 2015, 29, 572.29.	0.2	0
48	Specificity and Activity of Yâ€family DNA Polymerases DinB and Pol Kappa. FASEB Journal, 2015, 29, .	0.2	0
49	Nonâ€cognate DNA damage prevents formation of active conformation of Yâ€family DNA polymerases DinB and pol kappa. FASEB Journal, 2015, 29, 561.8.	0.2	0
50	Investigation of the Mechanism of Action of Oxazolidinones. FASEB Journal, 2015, 29, 575.10.	0.2	1
51	Characterization of the Nâ€terminal Arms of the Polymerase Manager Protein UmuD. FASEB Journal, 2015, 29, 561.10.	0.2	0
52	Expression and purification of putative Yâ€family polymerase DinB from Sinorhizobium meliloti. FASEB Journal, 2015, 29, 561.4.	0.2	0
53	Directed Evolution of DinB in Escherichia coli by Hydroxylamine Mutagenesis and UV Selection. FASEB Journal, 2015, 29, 560.5.	0.2	0
54	Functional Characterization of Structural Genomics Proteins in the Crotonase Superfamily. FASEB Journal, 2015, 29, 573.18.	0.2	0

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55	Conformational Analysis of Processivity Clamps in Solution Demonstrates that Tertiary Structure Does Not Correlate with Protein Dynamics. Structure, 2014, 22, 572-581.	1.6	30
56	Structure activity relationship study of mezzettiasides natural products and their four new disaccharide analogues for anticancer/antibacterial activity. MedChemComm, 2014, 5, 1138-1142.	3.5	13
57	Cryptocaryol Structureâ€“Activity Relationship Study of Cancer Cell Cytotoxicity and Ability to Stabilize PDCD4. ACS Medicinal Chemistry Letters, 2014, 5, 522-526.	1.3	23
58	Use of FRET to Study Dynamics of DNA Replication. , 2014, , 95-111.		0
59	Dimer exchange and cleavage specificity of the DNA damage response protein UmuD. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2013, 1834, 611-620.	1.1	10
60	Discrimination against major groove adducts by Y-family polymerases of the DinB subfamily. DNA Repair, 2013, 12, 713-722.	1.3	18
61	Polymerase manager protein UmuD directly regulates Escherichia coli DNA polymerase III Â binding to ssDNA. Nucleic Acids Research, 2013, 41, 8959-8968.	6.5	9
62	Point mutations in Escherichia coli DNA pol V that confer resistance to nonâ€cognate DNA damage. FASEB Journal, 2013, 27, 758.2.	0.2	0
63	Conformational analysis of processivity clamps demonstrates that tertiary structure does not correlate with structural dynamics. FASEB Journal, 2013, 27, 541.1.	0.2	0
64	UmuD participates in a primitive DNA damage checkpoint by interacting with DNA pol III Î± and SSB. FASEB Journal, 2013, 27, 538.3.	0.2	0
65	Successful computational prediction of active site and distal residues essential for function in DNA polymerase III alpha subunit. FASEB Journal, 2013, 27, 541.3.	0.2	0
66	Computational prediction and validation of putative ketosteroid isomerase (KSI) structural genomics proteins. FASEB Journal, 2013, 27, 811.5.	0.2	0
67	Selective disruption of the DNA polymerase III Â-Â complex by the umuD gene products. Nucleic Acids Research, 2012, 40, 5511-5522.	6.5	14
68	Effects of nonâ€catalytic, distal amino acid residues on activity of E. coli DinB (DNA polymerase) Tj ETQq0 0 0 rgBT /Overlock 10	0.9	20
69	Multiple Strategies for Translesion Synthesis in Bacteria. Cells, 2012, 1, 799-831.	1.8	25
70	Point mutations in Escherichia coli DNA pol V that confer resistance to nonâ€cognate DNA damage. FASEB Journal, 2012, 26, 539.14.	0.2	0
71	The Escherichia coli SOSâ€induced umuD gene products interact with singleâ€stranded DNA binding protein. FASEB Journal, 2012, 26, .	0.2	0
72	Multiple forms of the E. coli SOS response protein UmuD. FASEB Journal, 2012, 26, 539.7.	0.2	0

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73	Successful computational prediction of residues important for function in DNA polymerase III alpha subunit. FASEB Journal, 2012, 26, 739.1.	0.2	0
74	Electron spin labeling reveals the highly dynamic N-terminal arms of the SOS mutagenesis protein UmuD. Molecular BioSystems, 2011, 7, 3183.	2.9	7
75	Escherichia coli Processivity Clamp Î² from DNA Polymerase III Is Dynamic in Solution. Biochemistry, 2011, 50, 5958-5968.	1.2	40
76	A Tale of Two Isomerases: Compact versus Extended Active Sites in Ketosteroid Isomerase and Phosphoglucose Isomerase. Biochemistry, 2011, 50, 9283-9295.	1.2	32
77	Discrimination against the Cytosine Analog tC by Escherichia coli DNA Polymerase IV DinB. Journal of Molecular Biology, 2011, 409, 89-100.	2.0	14
78	Escherichia coli Y family DNA polymerases. Frontiers in Bioscience - Landmark, 2011, 16, 3164.	3.0	24
79	Crystal structure of a metalâ€dependent phosphoesterase (YP_910028.1) from Bifidobacterium adolescentis: Computational prediction and experimental validation of phosphoesterase activity. Proteins: Structure, Function and Bioinformatics, 2011, 79, 2146-2160.	1.5	11
80	Characterization of Escherichia coli UmuC Active-Site Loops Identifies Variants That Confer UV Hypersensitivity. Journal of Bacteriology, 2011, 193, 5400-5411.	1.0	12
81	The Dimeric SOS Mutagenesis Protein UmuD Is Active as a Monomer. Journal of Biological Chemistry, 2011, 286, 3607-3617.	1.6	13
82	Discrimination against the Fluorescent Cytosine Analog tC by Escherichia coli DNA Polymerase IV DinB. FASEB Journal, 2011, 25, 880.11.	0.2	0
83	Identification of critical residues in DNA polymerase III alpha through protein engineering. FASEB Journal, 2011, 25, 880.4.	0.2	0
84	Conformational and dynamic characterization of the Escherichia coli DNA polymerase III beta processivity clamp. FASEB Journal, 2011, 25, 880.2.	0.2	0
85	E. coli UmuD conformational dynamics in response to DNA damage. FASEB Journal, 2011, 25, 500.11.	0.2	0
86	Investigating the interaction between the alpha subunit of DNA polymerase III and UmuD. FASEB Journal, 2011, 25, 880.9.	0.2	0
87	The Roles of UmuD in Regulating Mutagenesis. Journal of Nucleic Acids, 2010, 2010, 1-12.	0.8	15
88	Conformational Dynamics of the Escherichia coli DNA Polymerase Manager Proteins UmuD and UmuDâ€². Journal of Molecular Biology, 2010, 398, 40-53.	2.0	20
89	Polymerase Switching in Response to DNA Damage. Biological and Medical Physics Series, 2010, , 241-292.	0.3	3
90	Evidence for multiple active forms of the DNA damage response protein UmuD. FASEB Journal, 2010, 24, 875.4.	0.2	0

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91	DNA damage response protein UmuD displays conformational dynamics. FASEB Journal, 2010, 24, 880.2.	0.2	0
92	Steric Gate Variants of UmuC Confer UV Hypersensitivity onEscherichia coli. Journal of Bacteriology, 2009, 191, 4815-4823.	1.0	18
93	Characterization of Novel Alleles of the Escherichia coli umuDC Genes Identifies Additional Interaction Sites of UmuC with the Beta Clamp. Journal of Bacteriology, 2009, 191, 5910-5920.	1.0	16
94	Song: SOS (To the Tune of ABBA's â€œSOSâ€). Biochemistry and Molecular Biology Education, 2009, 37, 316-316.	0.5	1
95	Regulation of DNA damage responses by the polymerase manager proteins UmuD and UmuDâ€². FASEB Journal, 2009, 23, 837.1.	0.2	0
96	Distinct Double- and Single-Stranded DNA Binding of E. coli Replicative DNA Polymerase III Î± Subunit. ACS Chemical Biology, 2008, 3, 577-587.	1.6	32
97	Steric Gate Variants in a Y family DNA Polymerase Confer UVâ€Hypersensitivity. FASEB Journal, 2008, 22, 990.3.	0.2	0
98	Dynamics of the polymerase manager protein UmuD: DNA damage tolerance in E. coli. FASEB Journal, 2008, 22, 591.4.	0.2	0
99	Y-family DNA polymerases in Escherichia coli. Trends in Microbiology, 2007, 15, 70-77.	3.5	137
100	Active site mutations in the Y family DNA polymerase UmuC cause hypersensitivity to UV light and are dominant negative. FASEB Journal, 2007, 21, A659.	0.2	0
101	Characterization of Escherichia coli Translesion Synthesis Polymerases and Their Accessory Factors. Methods in Enzymology, 2006, 408, 318-340.	0.4	46
102	Two processivity clamp interactions differentially alter the dual activities of UmuC. Molecular Microbiology, 2006, 59, 460-474.	1.2	36
103	A Non-cleavable UmuD Variant That Acts as a UmuDâ€² Mimic. Journal of Biological Chemistry, 2006, 281, 9633-9640.	1.6	24
104	A Nonâ€cleavable UmuD variant that acts as a UmuDâ€™ mimic. FASEB Journal, 2006, 20, LB55.	0.2	0
105	ILV methyl NMR resonance assignments of the 81ÂkDa E. coli Î²-clamp. Biomolecular NMR Assignments, 0, , .	0.4	1