Mark Dillingham

List of Publications by Year
in descending order

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84 papers	6,138 citations	109321 35 h-index	85541 71 g-index
105 all docs	105 docs citations	105 times ranked	4046 citing authors

#	Article	IF	Citations
1	Human HELB is a processive motor protein that catalyzes RPA clearance from single-stranded DNA. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2112376119.	7.1	16
2	Long DNA constructs to study helicases and nucleic acid translocases using optical tweezers. Methods in Enzymology, 2022, , .	1.0	1
3	Targeted control of pneumolysin production by a mobile genetic element in Streptococcus pneumoniae. Microbial Genomics, 2022, 8, .	2.0	5
4	Highly efficient CRISPR-mediated large DNA docking and multiplexed prime editing using a single baculovirus. Nucleic Acids Research, 2022, 50, 7783-7799.	14.5	15
5	A stapled peptide mimetic of the CtIP tetramerization motif interferes with double-strand break repair and replication fork protection. Science Advances, 2021, 7, .	10.3	8
6	Analysis of the PcrA-RNA polymerase complex reveals a helicase interaction motif and a role for PcrA/UvrD helicase in the suppression of R-loops. ELife, 2021, 10, .	6.0	18
7	CTP promotes efficient ParB-dependent DNA condensation by facilitating one-dimensional diffusion from parS. ELife, 2021, 10, .	6.0	32
8	Bulk and single-molecule analysis of a bacterial DNA2-like helicaseâ€“nuclease reveals a single-stranded DNA looping motor. Nucleic Acids Research, 2020, 48, 7991-8005.	14.5	5
9	Refined measurement of SecA-driven protein secretion reveals that translocation is indirectly coupled to ATP turnover. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31808-31816.	7.1	27
10	ParB dynamics and the critical role of the CTD in DNA condensation unveiled by combined force-fluorescence measurements. ELife, 2019, 8, .	6.0	22
11	Direct removal of RNA polymerase barriers to replication by accessory replicative helicases. Nucleic Acids Research, 2019, 47, 5100-5113.	14.5	41
12	CtIP forms a tetrameric dumbbell-shaped particle which bridges complex DNA end structures for double-strand break repair. ELife, 2019, 8, .	6.0	23
13	Force determination in lateral magnetic tweezers combined with TIRF microscopy. Nanoscale, 2018, 10, 4579-4590.	5.6	27
14	The Conformational Landscape of SMC: A FRET Study. Biophysical Journal, 2018, 114, 209a.	0.5	0
15	The molecular basis of protein toxin HicAâ€“dependent binding of the protein antitoxin HicB to DNA. Journal of Biological Chemistry, 2018, 293, 19429-19440.	3.4	10
16	The 2B subdomain of Rep helicase links translocation along DNA with protein displacement. Nucleic Acids Research, 2018, 46, 8917-8925.	14.5	22
17	The structure and function of an RNA polymerase interaction domain in the PcrA/UvrD helicase. Nucleic Acids Research, 2017, 45, 3875-3887.	14.5	31
18	Inhibiting translation elongation can aid genome duplication in Escherichia coli. Nucleic Acids Research, 2017, 45, 2571-2584.	14.5	12

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19	The structural basis for dynamic DNA binding and bridging interactions which condense the bacterial centromere. ELife, 2017, 6, .	6.0	64
20	Chi hotspots trigger a conformational change in the helicase-like domain of AddAB to activate homologous recombination. Nucleic Acids Research, 2016, 44, 2727-2741.	14.5	6
21	Structural basis for the inhibition of RecBCD by Gam and its synergistic antibacterial effect with quinolones. ELife, 2016, 5, .	6.0	50
22	Specific and non-specific interactions of ParB with DNA: implications for chromosome segregation. Nucleic Acids Research, 2015, 43, 719-731.	14.5	68
23	Probing DNA Helicase Kinetics with Temperatureâ€Controlled Magnetic Tweezers. Small, 2015, 11, 1273-1284.	10.0	21
24	Recombination hotspots attenuate the coupled ATPase and translocase activities of an AddAB-type helicaseâ€“nuclease. Nucleic Acids Research, 2014, 42, 5633-5643.	14.5	8
25	Structural basis for translocation by AddAB helicaseâ€“nuclease and its arrest at Ï‡ sites. Nature, 2014, 508, 416-419.	27.8	43
26	Single molecule approaches to monitor the recognition and resection of double-stranded DNA breaks during homologous recombination. DNA Repair, 2014, 20, 119-129.	2.8	11
27	Engineering a reagentless biosensor for single-stranded DNA to measure real-time helicase activity in Bacillus. Biosensors and Bioelectronics, 2014, 61, 579-586.	10.1	6
28	Condensation of DNA Mediated by the Bacterial Centromere Binding Protein Spo0J/ParB. Biophysical Journal, 2014, 106, 429a.	0.5	0
29	Interactions Between the SMC-Complex, Spo0J and DNA. Biophysical Journal, 2014, 106, 73a-74a.	0.5	0
30	Probing the Kinetics of a Model Helicase-Nuclease with a Temperature-Controlled Magnetic Tweezers. Biophysical Journal, 2014, 106, 393a-394a.	0.5	0
31	AFM volumetric methods for the characterization of proteins and nucleic acids. Methods, 2013, 60, 113-121.	3.8	47
32	DNA Scanning Mechanism of a Translocating Motor Protein. Biophysical Journal, 2013, 104, 540a-541a.	0.5	0
33	On the mechanism of recombination hotspot scanning during double-stranded DNA break resection. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2562-71.	7.1	34
34	Monomeric PcrA helicase processively unwinds plasmid lengths of DNA in the presence of the initiator protein RepD. Nucleic Acids Research, 2013, 41, 5010-5023.	14.5	40
35	Superfamily 1 helicases. Frontiers in Bioscience - Scholar, 2013, S5, 206-216.	2.1	34
36	The Conserved C-Terminus of the PcrA/UvrD Helicase Interacts Directly with RNA Polymerase. PLoS ONE, 2013, 8, e78141.	2.5	48

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37	Insights into Chi recognition from the structure of an AddAB-type helicase-nuclease complex. EMBO Journal, 2012, 31, 1568-1578.	7.8	56
38	Alteration of Ï‡ recognition by RecBCD reveals a regulated molecular latch and suggests a channel-bypass mechanism for biological control. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8907-8912.	7.1	27
39	Modulation of the Translocation Properties of a Model Helicase by DNA Damage and Sequence Content within the Track. Biophysical Journal, 2012, 102, 611a.	0.5	0
40	Molecular determinants responsible for recognition of the single-stranded DNA regulatory sequence, Ï‡, by RecBCD enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8901-8906.	7.1	52
41	Using DNA as a Fiducial Marker To Study SMC Complex Interactions with the Atomic Force Microscope. Biophysical Journal, 2012, 102, 839-848.	0.5	37
42	A New Method for Inferring Hidden Markov Models from Noisy Time Sequences. PLoS ONE, 2012, 7, e29703.	2.5	40
43	Ironâ€“sulphur clusters in nucleic acid processing enzymes. Current Opinion in Structural Biology, 2012, 22, 94-100.	5.7	126
44	How to Build a DNA Unwinding Machine. Structure, 2012, 20, 1127-1128.	3.3	3
45	The conflict between DNA replication and transcription. Molecular Microbiology, 2012, 85, 12-20.	2.5	82
46	A Single-Molecule Approach to Visualize the Unwinding Activity of DNA Helicases. Methods in Molecular Biology, 2011, 778, 193-214.	0.9	12
47	Recombination Hotspots and SSB Proteins Couple Translocation and Unwinding Activities of the AddAb Helicase-Nuclease. Biophysical Journal, 2011, 100, 239a.	0.5	0
48	Recombination Hotspots and Single-Stranded DNA Binding Proteins Couple DNA Translocation to DNA Unwinding by the AddAB Helicase-Nuclease. Molecular Cell, 2011, 42, 806-816.	9.7	36
49	Superfamily I helicases as modular components of DNA-processing machines. Biochemical Society Transactions, 2011, 39, 413-423.	3.4	59
50	The AddAB helicaseâ€“nuclease catalyses rapid and processive DNA unwinding using a single Superfamily 1A motor domain. Nucleic Acids Research, 2011, 39, 2271-2285.	14.5	39
51	The processing of double-stranded DNA breaks for recombinational repair by helicaseâ€“nuclease complexes. DNA Repair, 2010, 9, 276-285.	2.8	79
52	Atomic Force Microscopy Shows that Chi Sequences and SSB Proteins Prevent DNA Reannealing Behind the Translocating AddAB Helicase-Nuclease. Biophysical Journal, 2010, 98, 65a.	0.5	0
53	Activation of a Helicase Motor Upon Encounter With a Specific Sequence in the DNA Track. Biophysical Journal, 2010, 98, 66a.	0.5	0
54	Visualizing helicases unwinding DNA at the single molecule level. Nucleic Acids Research, 2010, 38, 4448-4457.	14.5	58

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55	An Iron-Sulfur Cluster Is Essential for the Binding of Broken DNA by AddAB-type Helicase-Nucleases. Journal of Biological Chemistry, 2009, 284, 7746-7755.	3.4	92
56	The unstructured C-terminal extension of UvrD interacts with UvrB, but is dispensable for nucleotide excision repair. DNA Repair, 2009, 8, 1300-1310.	2.8	56
57	Rep Provides a Second Motor at the Replisome to Promote Duplication of Protein-Bound DNA. Molecular Cell, 2009, 36, 654-666.	9.7	158
58	Probing DNA Unwinding By Single Helicases. Biophysical Journal, 2009, 96, 414a.	0.5	0
59	Fluorescent Single-Stranded DNA Binding Protein as a Probe for Sensitive, Real-Time Assays of Helicase Activity. Biophysical Journal, 2008, 95, 3330-3339.	0.5	63
60	Protein modification for single molecule fluorescence microscopy. Organic and Biomolecular Chemistry, 2008, 6, 3031.	2.8	16
61	RecBCD Enzyme and the Repair of Double-Stranded DNA Breaks. Microbiology and Molecular Biology Reviews, 2008, 72, 642-671.	6.6	479
62	Directional Loading and Stimulation of PcrA Helicase by the Replication Initiator Protein RepD. Journal of Molecular Biology, 2007, 371, 336-348.	4.2	47
63	A Dual-nuclease Mechanism for DNA Break Processing by AddAB-type Helicase-nucleases. Journal of Molecular Biology, 2007, 371, 66-78.	4.2	64
64	Structure and Mechanism of Helicases and Nucleic Acid Translocases. Annual Review of Biochemistry, 2007, 76, 23-50.	11.1	1,098
65	Replicative Helicases: A Staircase with a Twist. Current Biology, 2006, 16, R844-R847.	3.9	2
66	The AddAB Helicase/Nuclease Forms a Stable Complex with Its Cognate Ï‡ Sequence During Translocation. Journal of Biological Chemistry, 2006, 281, 18610-18617.	3.4	40
67	Bipolar DNA Translocation Contributes to Highly Processive DNA Unwinding by RecBCD Enzyme. Journal of Biological Chemistry, 2005, 280, 37069-37077.	3.4	44
68	Translocation by the RecB Motor Is an Absolute Requirement for Ï‡-Recognition and RecA Protein Loading by RecBCD Enzyme. Journal of Biological Chemistry, 2005, 280, 37078-37087.	3.4	40
69	Crystal structure of RecBCD enzyme reveals a machine for processing DNA breaks. Nature, 2004, 432, 187-193.	27.8	383
70	RecBCD enzyme is a bipolar DNA helicase. Nature, 2003, 423, 893-897.	27.8	196
71	A Molecular Throttle. Cell, 2003, 114, 647-654.	28.9	176
72	Direct Measurement of Single-Stranded DNA Translocation by PcrA Helicase Using the Fluorescent Base Analogue 2-Aminopurine. Biochemistry, 2002, 41, 643-651.	2.5	105

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73	A Step Backward in Advancing DNA Replication. Molecular Cell, 2001, 8, 734-736.	9.7	20
74	Defining the roles of individual residues in the single-stranded DNA binding site of PcrA helicase. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 8381-8387.	7.1	95
75	Uncoupling DNA translocation and helicase activity in PcrA: direct evidence for an active mechanism. EMBO Journal, 2000, 19, 3799-3810.	7.8	141
76	Demonstration of Unidirectional Single-Stranded DNA Translocation by PcrA Helicase:â€‰ Measurement of Step Size and Translocation Speed. Biochemistry, 2000, 39, 205-212.	2.5	222
77	Site-directed mutagenesis of motif III in PcrA helicase reveals a role in coupling ATP hydrolysis to strand separation. Nucleic Acids Research, 1999, 27, 3310-3317.	14.5	89
78	Plasmid replication initiator protein RepD increases the processivity of PcrA DNA helicase. Nucleic Acids Research, 1999, 27, 1421-1428.	14.5	70
79	Crystal Structures of Complexes of PcrA DNA Helicase with a DNA Substrate Indicate an Inchworm Mechanism. Cell, 1999, 97, 75-84.	28.9	756
80	DNA binding mediates conformational changes and metal ion coordination in the active site of PcrA helicase 1 1Edited by A. R. Fersht. Journal of Molecular Biology, 1999, 290, 137-148.	4.2	110
81	Escherichia coli ribosomal protein L3 stimulates the helicase activity of the Bacillus stearothermophilus PcrA helicase. Nucleic Acids Research, 1998, 26, 2374-2379.	14.5	22
82	Repercussions of DNA tracking by the type IC restriction endonuclease EcoR124I on linear, circular and catenated substrates. EMBO Journal, 1996, 15, 6335-47.	7.8	30
83	Crystal structure of RecBCD : a machine for processing DNA breaks. , 0, 2005, .		1
84	Towards a molecular mechanism underlying mitochondrial protein import through the TOM and TIM23 complexes. ELife, 0, 11, .	6.0	15