

Anthony Maxwell

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

102
papers

6,636
citations

41
h-index

80
g-index

206
ext. papers

7,459
ext. citations

8.9
avg, IF

5.97
L-index

#	Paper	IF	Citations
102	Crystal structure of an N-terminal fragment of the DNA gyrase B protein. <i>Nature</i> , 1991 , 351, 624-9	50.4	512
101	DNA gyrase: structure and function. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 1991 , 26, 335-87	5.5	505
100	Crystal structure of the breakage-reunion domain of DNA gyrase. <i>Nature</i> , 1997 , 388, 903-6	50.4	405
99	Exploiting bacterial DNA gyrase as a drug target: current state and perspectives. <i>Applied Microbiology and Biotechnology</i> , 2011 , 92, 479-97	5.7	330
98	DNA gyrase as a drug target. <i>Trends in Microbiology</i> , 1997 , 5, 102-9	12.4	309
97	The 43-kilodalton N-terminal fragment of the DNA gyrase B protein hydrolyzes ATP and binds coumarin drugs. <i>Biochemistry</i> , 1993 , 32, 2717-24	3.2	307
96	The ATP-binding site of type II topoisomerases as a target for antibacterial drugs. <i>Current Topics in Medicinal Chemistry</i> , 2003 , 3, 283-303	3	225
95	The interaction between coumarin drugs and DNA gyrase. <i>Molecular Microbiology</i> , 1993 , 9, 681-6	4.1	222
94	A fluoroquinolone resistance protein from <i>Mycobacterium tuberculosis</i> that mimics DNA. <i>Science</i> , 2005 , 308, 1480-3	33.3	219
93	The interaction of coumarin antibiotics with fragments of DNA gyrase B protein. <i>Biochemistry</i> , 1996 , 35, 5083-92	3.2	145
92	<i>Arabidopsis thaliana</i> DNA gyrase is targeted to chloroplasts and mitochondria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 7821-6	11.5	124
91	Interaction between DNA gyrase and quinolones: effects of alanine mutations at GyrA subunit residues Ser(83) and Asp(87). <i>Antimicrobial Agents and Chemotherapy</i> , 2001 , 45, 1994-2000	5.9	122
90	The complex of DNA gyrase and quinolone drugs with DNA forms a barrier to transcription by RNA polymerase. <i>Journal of Molecular Biology</i> , 1994 , 242, 351-63	6.5	113
89	gyrB mutations which confer coumarin resistance also affect DNA supercoiling and ATP hydrolysis by <i>Escherichia coli</i> DNA gyrase. <i>Molecular Microbiology</i> , 1992 , 6, 1617-24	4.1	102
88	DNA Topoisomerases. <i>EcoSal Plus</i> , 2015 , 6,	7.7	96
87	RHL1 is an essential component of the plant DNA topoisomerase VI complex and is required for ploidy-dependent cell growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 18736-41	11.5	96
86	Simocyclinone D8, an inhibitor of DNA gyrase with a novel mode of action. <i>Antimicrobial Agents and Chemotherapy</i> , 2005 , 49, 1093-100	5.9	95

85	BIN4, a novel component of the plant DNA topoisomerase VI complex, is required for endoreduplication in Arabidopsis. <i>Plant Cell</i> , 2007 , 19, 3655-68	11.6	90
84	The DNA gyrase-quinolone complex. ATP hydrolysis and the mechanism of DNA cleavage. <i>Journal of Biological Chemistry</i> , 1998 , 273, 22615-26	5.4	90
83	Probing the binding of coumarins and cyclothialidines to DNA gyrase. <i>Biochemistry</i> , 1999 , 38, 1967-76	3.2	85
82	Evidence for a conformational change in the DNA gyrase-DNA complex from hydroxyl radical footprinting. <i>Nucleic Acids Research</i> , 1994 , 22, 1567-75	20.1	84
81	Multiple modes of Escherichia coli DNA gyrase activity revealed by force and torque. <i>Nature Structural and Molecular Biology</i> , 2007 , 14, 264-71	17.6	83
80	The role of GyrB in the DNA cleavage-religation reaction of DNA gyrase: a proposed two metal-ion mechanism. <i>Journal of Molecular Biology</i> , 2002 , 318, 361-71	6.5	83
79	DNA cleavage is not required for the binding of quinolone drugs to the DNA gyrase-DNA complex. <i>Biochemistry</i> , 1996 , 35, 7387-93	3.2	82
78	Probing the role of the ATP-operated clamp in the strand-passage reaction of DNA gyrase. <i>Nucleic Acids Research</i> , 1996 , 24, 4868-73	20.1	77
77	A crystal structure of the bifunctional antibiotic simocyclinone D8, bound to DNA gyrase. <i>Science</i> , 2009 , 326, 1415-8	33.3	74
76	Inhibition of DNA gyrase and DNA topoisomerase IV of Staphylococcus aureus and Escherichia coli by aminocoumarin antibiotics. <i>Journal of Antimicrobial Chemotherapy</i> , 2011 , 66, 2061-9	5.1	73
75	Energy coupling in type II topoisomerases: why do they hydrolyze ATP?. <i>Biochemistry</i> , 2007 , 46, 7929-41	3.2	70
74	Nucleotide binding to DNA gyrase causes loss of DNA wrap. <i>Journal of Molecular Biology</i> , 2004 , 337, 597-610	6.1	70
73	The 24 kDa N-terminal sub-domain of the DNA gyrase B protein binds coumarin drugs. <i>Molecular Microbiology</i> , 1994 , 12, 365-73	4.1	70
72	High-throughput assays for DNA gyrase and other topoisomerases. <i>Nucleic Acids Research</i> , 2006 , 34, e104	20.1	63
71	The complex of DNA gyrase and quinolone drugs on DNA forms a barrier to the T7 DNA polymerase replication complex. <i>Journal of Molecular Biology</i> , 2000 , 304, 779-91	6.5	63
70	The interaction of drugs with DNA gyrase: a model for the molecular basis of quinolone action. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2000 , 19, 1249-64	1.4	63
69	Probing the two-gate mechanism of DNA gyrase using cysteine cross-linking. <i>Biochemistry</i> , 1999 , 38, 13502-11	3.2	59
68	Locking the ATP-operated clamp of DNA gyrase: probing the mechanism of strand passage. <i>Journal of Molecular Biology</i> , 2001 , 306, 969-84	6.5	57

67	DNA topoisomerase I and DNA gyrase as targets for TB therapy. <i>Drug Discovery Today</i> , 2017 , 22, 510-518.8	54
66	Dietary and Microbial Oxazoles Induce Intestinal Inflammation by Modulating Aryl Hydrocarbon Receptor Responses. <i>Cell</i> , 2018 , 173, 1123-1134.e11	56.2 52
65	The naphthoquinone diospyrin is an inhibitor of DNA gyrase with a novel mechanism of action. <i>Journal of Biological Chemistry</i> , 2013 , 288, 5149-56	5.4 51
64	<i>Galleria mellonella</i> (greater wax moth) larvae as a model for antibiotic susceptibility testing and acute toxicity trials. <i>BMC Research Notes</i> , 2017 , 10, 428	2.3 49
63	The ancestral role of ATP hydrolysis in type II topoisomerases: prevention of DNA double-strand breaks. <i>Nucleic Acids Research</i> , 2011 , 39, 6327-39	20.1 48
62	Quinolones: Mechanism, Lethality and Their Contributions to Antibiotic Resistance. <i>Molecules</i> , 2020 , 25,	4.8 44
61	Identification of a residue involved in transition-state stabilization in the ATPase reaction of DNA gyrase. <i>Biochemistry</i> , 1998 , 37, 9658-67	3.2 41
60	DNA Gyrase Is the Target for the Quinolone Drug Ciprofloxacin in <i>Arabidopsis thaliana</i> . <i>Journal of Biological Chemistry</i> , 2016 , 291, 3136-44	5.4 40
59	Coupling of the biosynthesis and export of the DNA gyrase inhibitor simocyclinone in <i>Streptomyces antibioticus</i> . <i>Molecular Microbiology</i> , 2009 , 72, 1462-74	4.1 40
58	Overexpression and purification of bacterial DNA gyrase. <i>Methods in Molecular Biology</i> , 1999 , 94, 135-44.1.4	4.0
57	Locking the DNA gate of DNA gyrase: investigating the effects on DNA cleavage and ATP hydrolysis. <i>Biochemistry</i> , 1999 , 38, 14157-64	3.2 40
56	Structural and biochemical analysis of the pentapeptide repeat protein EfsQnr, a potent DNA gyrase inhibitor. <i>Antimicrobial Agents and Chemotherapy</i> , 2011 , 55, 110-7	5.9 39
55	How do type II topoisomerases use ATP hydrolysis to simplify DNA topology beyond equilibrium? Investigating the relaxation reaction of nonsupercoiling type II topoisomerases. <i>Journal of Molecular Biology</i> , 2009 , 385, 1397-408	6.5 38
54	Single-molecule imaging of DNA gyrase activity in living <i>Escherichia coli</i> . <i>Nucleic Acids Research</i> , 2019 , 47, 210-220	20.1 37
53	Thiophene antibacterials that allosterically stabilize DNA-cleavage complexes with DNA gyrase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E4492-E4500	11.5 33
52	A new crystal structure of the bifunctional antibiotic simocyclinone D8 bound to DNA gyrase gives fresh insight into the mechanism of inhibition. <i>Journal of Molecular Biology</i> , 2014 , 426, 2023-33	6.5 30
51	Modular structure of the full-length DNA gyrase B subunit revealed by small-angle X-ray scattering. <i>Structure</i> , 2007 , 15, 329-39	5.2 30
50	A strand-passage conformation of DNA gyrase is required to allow the bacterial toxin, CcdB, to access its binding site. <i>Nucleic Acids Research</i> , 2006 , 34, 4667-76	20.1 30

49	DNA Topoisomerase Inhibitors: Trapping a DNA-Cleaving Machine in Motion. <i>Journal of Molecular Biology</i> , 2019 , 431, 3427-3449	6.5	29
48	Structures of the TetR-like simocyclinone efflux pump repressor, SimR, and the mechanism of ligand-mediated derepression. <i>Journal of Molecular Biology</i> , 2011 , 408, 40-56	6.5	28
47	Mycobacterium fluoroquinolone resistance protein B, a novel small GTPase, is involved in the regulation of DNA gyrase and drug resistance. <i>Nucleic Acids Research</i> , 2013 , 41, 2370-81	20.1	27
46	Base-pair resolution analysis of the effect of supercoiling on DNA flexibility and major groove recognition by triplex-forming oligonucleotides. <i>Nature Communications</i> , 2021 , 12, 1053	17.4	27
45	Lead selection and characterization of antitubercular compounds using the Nested Chemical Library. <i>Tuberculosis</i> , 2015 , 95 Suppl 1, S200-6	2.6	24
44	Architecture of Microcin B17 Synthetase: An Octameric Protein Complex Converting a Ribosomally Synthesized Peptide into a DNA Gyrase Poison. <i>Molecular Cell</i> , 2019 , 73, 749-762.e5	17.6	23
43	New insights into the binding mode of pyridine-3-carboxamide inhibitors of E. coli DNA gyrase. <i>Bioorganic and Medicinal Chemistry</i> , 2019 , 27, 3546-3550	3.4	21
42	The ATP-operated clamp of human DNA topoisomerase IIalpha: hyperstimulation of ATPase by "piggy-back" binding. <i>Journal of Molecular Biology</i> , 2002 , 320, 171-88	6.5	21
41	The Origins of Specificity in the Microcin-Processing Protease TldD/E. <i>Structure</i> , 2017 , 25, 1549-1561.e5	5.2	20
40	The Microbial Toxin Microcin B17: Prospects for the Development of New Antibacterial Agents. <i>Journal of Molecular Biology</i> , 2019 , 431, 3400-3426	6.5	20
39	Predictive modeling targets thymidylate synthase ThyX in Mycobacterium tuberculosis. <i>Scientific Reports</i> , 2016 , 6, 27792	4.9	20
38	Quinolone-resistant gyrase mutants demonstrate decreased susceptibility to triclosan. <i>Journal of Antimicrobial Chemotherapy</i> , 2017 , 72, 2755-2763	5.1	20
37	The role of Ca ²⁺ in the activity of Mycobacterium tuberculosis DNA gyrase. <i>Nucleic Acids Research</i> , 2012 , 40, 9774-87	20.1	20
36	Chimeric VEGFRs are activated by a small-molecule dimerizer and mediate downstream signalling cascades in endothelial cells. <i>Oncogene</i> , 2000 , 19, 5398-405	9.2	19
35	A new class of antibacterials, the imidazopyrazinones, reveal structural transitions involved in DNA gyrase poisoning and mechanisms of resistance. <i>Nucleic Acids Research</i> , 2018 , 46, 4114-4128	20.1	18
34	Use of a rapid throughput in vivo screen to investigate inhibitors of eukaryotic topoisomerase II enzymes. <i>Antimicrobial Agents and Chemotherapy</i> , 1998 , 42, 889-94	5.9	18
33	Use of divalent metal ions in the DNA cleavage reaction of topoisomerase IV. <i>Nucleic Acids Research</i> , 2011 , 39, 4808-17	20.1	17
32	DNA topoisomerases: Advances in understanding of cellular roles and multi-protein complexes via structure-function analysis. <i>BioEssays</i> , 2021 , 43, e2000286	4.1	17

31	Antibiotic-resistant bacteria in the guts of insects feeding on plants: prospects for discovering plant-derived antibiotics. <i>BMC Microbiology</i> , 2017 , 17, 223	4.5	16
30	Mass spectrometry reveals that the antibiotic simocyclinone D8 binds to DNA gyrase in a "bent-over" conformation: evidence of positive cooperativity in binding. <i>Biochemistry</i> , 2011 , 50, 3432-40 ³⁻²		16
29	Application of a novel microtitre plate-based assay for the discovery of new inhibitors of DNA gyrase and DNA topoisomerase VI. <i>PLoS ONE</i> , 2013 , 8, e58010	3.7	16
28	Temperature-sensitive suppressor mutations of the Escherichia coli DNA gyrase B protein. <i>Protein Science</i> , 2000 , 9, 1035-7	6.3	15
27	DNA G-segment bending is not the sole determinant of topology simplification by type II DNA topoisomerases. <i>Scientific Reports</i> , 2014 , 4, 6158	4.9	14
26	Exploiting nucleotide thiophosphates to probe mechanistic aspects of Escherichia coli DNA gyrase. <i>Biochemistry</i> , 1997 , 36, 6059-68	3.2	13
25	Potent DNA gyrase inhibitors bind asymmetrically to their target using symmetrical bifurcated halogen bonds. <i>Nature Communications</i> , 2021 , 12, 150	17.4	12
24	Negative supercoiling of DNA by gyrase is inhibited in Salmonella enterica serovar Typhimurium during adaptation to acid stress. <i>Molecular Microbiology</i> , 2018 , 107, 734-746	4.1	11
23	Imidazopyrazinones (IPYs): Non-Quinolone Bacterial Topoisomerase Inhibitors Showing Partial Cross-Resistance with Quinolones. <i>Journal of Medicinal Chemistry</i> , 2018 , 61, 3565-3581	8.3	11
22	A natural product inspired fragment-based approach towards the development of novel anti-bacterial agents. <i>MedChemComm</i> , 2016 , 7, 1387-1391	5	11
21	Oxytetracycline reduces the diversity of tetracycline-resistance genes in the Galleria mellonella gut microbiome. <i>BMC Microbiology</i> , 2018 , 18, 228	4.5	11
20	The role of monovalent cations in the ATPase reaction of DNA gyrase. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015 , 71, 996-1005		10
19	Developing ciprofloxacin analogues against plant DNA gyrase: a novel herbicide mode of action. <i>Chemical Communications</i> , 2018 , 54, 1869-1872	5.8	9
18	The plasmid-borne quinolone resistance protein QnrB, a novel DnaA-binding protein, increases the bacterial mutation rate by triggering DNA replication stress. <i>Molecular Microbiology</i> , 2019 , 111, 1529-1543 ⁴⁻¹		8
17	Discovery of a Novel DNA Gyrase-Targeting Antibiotic through the Chemical Perturbation of Streptomyces venezuelae Sporulation. <i>Cell Chemical Biology</i> , 2019 , 26, 1274-1282.e4	8.2	8
16	SimC7 Is a Novel NAD(P)H-Dependent Ketoreductase Essential for the Antibiotic Activity of the DNA Gyrase Inhibitor Simocyclinone. <i>Journal of Molecular Biology</i> , 2015 , 427, 2192-204	6.5	6
15	The EU approved antimalarial pyronaridine shows antitubercular activity and synergy with rifampicin, targeting RNA polymerase. <i>Tuberculosis</i> , 2018 , 112, 98-109	2.6	6
14	Exploring the Chemical Space of Benzothiazole-Based DNA Gyrase B Inhibitors. <i>ACS Medicinal Chemistry Letters</i> , 2020 , 11, 2433-2440	4.3	6

13	Interference between Triplex and Protein Binding to Distal Sites on Supercoiled DNA. <i>Biophysical Journal</i> , 2017 , 112, 523-531	2.9	5
12	Mapping DNA Topoisomerase Binding and Cleavage Genome Wide Using Next-Generation Sequencing Techniques. <i>Genes</i> , 2020 , 11,	4.2	5
11	A rapid high-resolution method for resolving DNA topoisomers. <i>BMC Research Notes</i> , 2018 , 11, 37	2.3	5
10	Structural insights into simocyclinone as an antibiotic, effector ligand and substrate. <i>FEMS Microbiology Reviews</i> , 2018 , 42,	15.1	3
9	Crystallization and preliminary X-ray analysis of a complex formed between the antibiotic simocyclinone D8 and the DNA breakage-reunion domain of Escherichia coli DNA gyrase. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2009 , 65, 846-8		3
8	A novel decatenation assay for DNA topoisomerases using a singly-linked catenated substrate. <i>BioTechniques</i> , 2020 , 69, 356-362	2.5	3
7	The pentapeptide-repeat protein, MfpA, interacts with mycobacterial DNA gyrase as a DNA T-segment mimic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
6	Structural and mechanistic analysis of ATPase inhibitors targeting mycobacterial DNA gyrase. <i>Journal of Antimicrobial Chemotherapy</i> , 2020 , 75, 2835-2842	5.1	2
5	Topology simplification: Important biological phenomenon or evolutionary relic?: Comment on "Disentangling DNA molecules" by Alexander Vologodskii. <i>Physics of Life Reviews</i> , 2016 , 18, 144-146	2.1	1
4	Enzymes that keep DNA under control. <i>EMBO Reports</i> , 2001 , 2, 271-276	6.5	1
3	Non-quinolone Topoisomerase Inhibitors 2018 , 593-618		1
2	DNA in a twist? How topoisomerases solve topological problems in DNA. <i>Biochemist</i> , 2018 , 40, 26-31	0.5	0
1	DNA gyrase as a drug target. <i>Biochemical Society Transactions</i> , 1999 , 27, A3-A3	5.1	