Anthony Maxwell

List of Publications by Year in Descending Order

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	The pentapeptide-repeat protein, MfpA, interacts with mycobacterial DNA gyrase as a DNA T-segment mimic. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
101	DNA topoisomerases: Advances in understanding of cellular roles and multi-protein complexes via structure-function analysis. *BioEssays*, **2021**, 43, e2000286	4.1	17
100	Base-pair resolution analysis of the effect of supercoiling on DNA flexibility and major groove recognition by triplex-forming oligonucleotides. *Nature Communications*, **2021**, 12, 1053	17.4	27
99	Potent DNA gyrase inhibitors bind asymmetrically to their target using symmetrical bifurcated halogen bonds. *Nature Communications*, **2021**, 12, 150	17.4	12
98	Mapping DNA Topoisomerase Binding and Cleavage Genome Wide Using Next-Generation Sequencing Techniques. *Genes*, **2020**, 11,	4.2	5
97	A novel decatenation assay for DNA topoisomerases using a singly-linked catenated substrate. *BioTechniques*, **2020**, 69, 356-362	2.5	3
96	Exploring the Chemical Space of Benzothiazole-Based DNA Gyrase B Inhibitors. *ACS Medicinal Chemistry Letters*, **2020**, 11, 2433-2440	4.3	6
95	Quinolones: Mechanism, Lethality and Their Contributions to Antibiotic Resistance. *Molecules*, **2020**, 25,	4.8	44
94	Structural and mechanistic analysis of ATPase inhibitors targeting mycobacterial DNA gyrase. *Journal of Antimicrobial Chemotherapy*, **2020**, 75, 2835-2842	5.1	2
93	New insights into the binding mode of pyridine-3-carboxamide inhibitors of E. coli DNA gyrase. *Bioorganic and Medicinal Chemistry*, **2019**, 27, 3546-3550	3.4	21
92	The Microbial Toxin Microcin B17: Prospects for the Development of New Antibacterial Agents. *Journal of Molecular Biology*, **2019**, 431, 3400-3426	6.5	20
91	The plasmid-borne quinolone resistance protein QnrB, a novel DnaA-binding protein, increases the bacterial mutation rate by triggering DNA replication stress. *Molecular Microbiology*, **2019**, 111, 1529-1543	4.1	8
90	DNA Topoisomerase Inhibitors: Trapping a DNA-Cleaving Machine in Motion. *Journal of Molecular Biology*, **2019**, 431, 3427-3449	6.5	29
89	Discovery of a Novel DNA Gyrase-Targeting Antibiotic through the Chemical Perturbation of Streptomyces venezuelae Sporulation. *Cell Chemical Biology*, **2019**, 26, 1274-1282.e4	8.2	8
88	Single-molecule imaging of DNA gyrase activity in living Escherichia coli. *Nucleic Acids Research*, **2019**, 47, 210-220	20.1	37
87	Architecture of Microcin B17 Synthetase: An Octameric Protein Complex Converting a Ribosomally Synthesized Peptide into a DNA Gyrase Poison. *Molecular Cell*, **2019**, 73, 749-762.e5	17.6	23
86	Structural insights into simocyclinone as an antibiotic, effector ligand and substrate. *FEMS Microbiology Reviews*, **2018**, 42,	15.1	3

85	Negative supercoiling of DNA by gyrase is inhibited in Salmonella enterica serovar Typhimurium during adaptation to acid stress. *Molecular Microbiology*, **2018**, 107, 734-746	4.1	11
84	Developing ciprofloxacin analogues against plant DNA gyrase: a novel herbicide mode of action. *Chemical Communications*, **2018**, 54, 1869-1872	5.8	9
83	Imidazopyrazinones (IPYs): Non-Quinolone Bacterial Topoisomerase Inhibitors Showing Partial Cross-Resistance with Quinolones. *Journal of Medicinal Chemistry*, **2018**, 61, 3565-3581	8.3	11
82	A new class of antibacterials, the imidazopyrazinones, reveal structural transitions involved in DNA gyrase poisoning and mechanisms of resistance. *Nucleic Acids Research*, **2018**, 46, 4114-4128	20.1	18
81	A rapid high-resolution method for resolving DNA topoisomers. *BMC Research Notes*, **2018**, 11, 37	2.3	5
80	The EU approved antimalarial pyronaridine shows antitubercular activity and synergy with rifampicin, targeting RNA polymerase. *Tuberculosis*, **2018**, 112, 98-109	2.6	6
79	DNA in a twist? How topoisomerases solve topological problems in DNA. *Biochemist*, **2018**, 40, 26-31	0.5	0
78	Non-quinolone Topoisomerase Inhibitors **2018**, 593-618		1
77	Oxytetracycline reduces the diversity of tetracycline-resistance genes in the Galleria mellonella gut microbiome. *BMC Microbiology*, **2018**, 18, 228	4.5	11
76	Dietary and Microbial Oxazoles Induce Intestinal Inflammation by Modulating Aryl Hydrocarbon Receptor Responses. *Cell*, **2018**, 173, 1123-1134.e11	56.2	52
75	Interference between Triplex and Protein Binding to Distal Sites on Supercoiled DNA. *Biophysical Journal*, **2017**, 112, 523-531	2.9	5
74	Thiophene antibacterials that allosterically stabilize DNA-cleavage complexes with DNA gyrase. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E4492-E4500	11.5	33
73	The Origins of Specificity in the Microcin-Processing Protease TldD/E. *Structure*, **2017**, 25, 1549-1561.e5	5.2	20
72	Galleria mellonella (greater wax moth) larvae as a model for antibiotic susceptibility testing and acute toxicity trials. *BMC Research Notes*, **2017**, 10, 428	2.3	49
71	Quinolone-resistant gyrase mutants demonstrate decreased susceptibility to triclosan. *Journal of Antimicrobial Chemotherapy*, **2017**, 72, 2755-2763	5.1	20
70	DNA topoisomerase I and DNA gyrase as targets for TB therapy. *Drug Discovery Today*, **2017**, 22, 510-518	8.8	54
69	Antibiotic-resistant bacteria in the guts of insects feeding on plants: prospects for discovering plant-derived antibiotics. *BMC Microbiology*, **2017**, 17, 223	4.5	16
68	Topology simplification: Important biological phenomenon or evolutionary relic?: Comment on "Disentangling DNA molecules" by Alexander Vologodskii. *Physics of Life Reviews*, **2016**, 18, 144-146	2.1	1

67	Predictive modeling targets thymidylate synthase ThyX in Mycobacterium tuberculosis. *Scientific Reports*, **2016**, 6, 27792	4.9	20
66	DNA Gyrase Is the Target for the Quinolone Drug Ciprofloxacin in Arabidopsis thaliana. *Journal of Biological Chemistry*, **2016**, 291, 3136-44	5.4	40
65	A natural product inspired fragment-based approach towards the development of novel anti-bacterial agents. *MedChemComm*, **2016**, 7, 1387-1391	5	11
64	The role of monovalent cations in the ATPase reaction of DNA gyrase. *Acta Crystallographica Section D: Biological Crystallography*, **2015**, 71, 996-1005		10
63	SimC7 Is a Novel NAD(P)H-Dependent Ketoreductase Essential for the Antibiotic Activity of the DNA Gyrase Inhibitor Simocyclinone. *Journal of Molecular Biology*, **2015**, 427, 2192-204	6.5	6
62	DNA Topoisomerases. *EcoSal Plus*, **2015**, 6,	7.7	96
61	Lead selection and characterization of antitubercular compounds using the Nested Chemical Library. *Tuberculosis*, **2015**, 95 Suppl 1, S200-6	2.6	24
60	A new crystal structure of the bifunctional antibiotic simocyclinone D8 bound to DNA gyrase gives fresh insight into the mechanism of inhibition. *Journal of Molecular Biology*, **2014**, 426, 2023-33	6.5	30
59	DNA G-segment bending is not the sole determinant of topology simplification by type II DNA topoisomerases. *Scientific Reports*, **2014**, 4, 6158	4.9	14
58	The naphthoquinone diospyrin is an inhibitor of DNA gyrase with a novel mechanism of action. *Journal of Biological Chemistry*, **2013**, 288, 5149-56	5.4	51
57	Mycobacterium fluoroquinolone resistance protein B, a novel small GTPase, is involved in the regulation of DNA gyrase and drug resistance. *Nucleic Acids Research*, **2013**, 41, 2370-81	20.1	27
56	Application of a novel microtitre plate-based assay for the discovery of new inhibitors of DNA gyrase and DNA topoisomerase VI. *PLoS ONE*, **2013**, 8, e58010	3.7	16
55	The role of Ca□+ in the activity of Mycobacterium tuberculosis DNA gyrase. *Nucleic Acids Research*, **2012**, 40, 9774-87	20.1	20
54	Inhibition of DNA gyrase and DNA topoisomerase IV of Staphylococcus aureus and Escherichia coli by aminocoumarin antibiotics. *Journal of Antimicrobial Chemotherapy*, **2011**, 66, 2061-9	5.1	73
53	Structures of the TetR-like simocyclinone efflux pump repressor, SimR, and the mechanism of ligand-mediated derepression. *Journal of Molecular Biology*, **2011**, 408, 40-56	6.5	28
52	Exploiting bacterial DNA gyrase as a drug target: current state and perspectives. *Applied Microbiology and Biotechnology*, **2011**, 92, 479-97	5.7	330
51	Mass spectrometry reveals that the antibiotic simocyclinone D8 binds to DNA gyrase in a "bent-over" conformation: evidence of positive cooperativity in binding. *Biochemistry*, **2011**, 50, 3432-40	3.2	16
50	Structural and biochemical analysis of the pentapeptide repeat protein EfsQnr, a potent DNA gyrase inhibitor. *Antimicrobial Agents and Chemotherapy*, **2011**, 55, 110-7	5.9	39

49	Use of divalent metal ions in the DNA cleavage reaction of topoisomerase IV. *Nucleic Acids Research* , **2011**, 39, 4808-17	20.1	17
48	The ancestral role of ATP hydrolysis in type II topoisomerases: prevention of DNA double-strand breaks. *Nucleic Acids Research*, **2011**, 39, 6327-39	20.1	48
47	A crystal structure of the bifunctional antibiotic simocyclinone D8, bound to DNA gyrase. *Science*, **2009**, 326, 1415-8	33.3	74
46	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. *Acta Crystallographica Section F: Structural Biology Communications*, **2009**, 65, 846-8		3
45	Coupling of the biosynthesis and export of the DNA gyrase inhibitor simocyclinone in Streptomyces antibioticus. *Molecular Microbiology*, **2009**, 72, 1462-74	4.1	40
44	How do type II topoisomerases use ATP hydrolysis to simplify DNA topology beyond equilibrium? Investigating the relaxation reaction of nonsupercoiling type II topoisomerases. *Journal of Molecular Biology*, **2009**, 385, 1397-408	6.5	38
43	Energy coupling in type II topoisomerases: why do they hydrolyze ATP?. *Biochemistry*, **2007**, 46, 7929-41	3.2	70
42	Multiple modes of Escherichia coli DNA gyrase activity revealed by force and torque. *Nature Structural and Molecular Biology*, **2007**, 14, 264-71	17.6	83
41	Modular structure of the full-length DNA gyrase B subunit revealed by small-angle X-ray scattering. *Structure*, **2007**, 15, 329-39	5.2	30
40	BIN4, a novel component of the plant DNA topoisomerase VI complex, is required for endoreduplication in Arabidopsis. *Plant Cell*, **2007**, 19, 3655-68	11.6	90
39	A strand-passage conformation of DNA gyrase is required to allow the bacterial toxin, CcdB, to access its binding site. *Nucleic Acids Research*, **2006**, 34, 4667-76	20.1	30
38	High-throughput assays for DNA gyrase and other topoisomerases. *Nucleic Acids Research*, **2006**, 34, e104	20.1	63
37	A fluoroquinolone resistance protein from Mycobacterium tuberculosis that mimics DNA. *Science*, **2005**, 308, 1480-3	33.3	219
36	Simocyclinone D8, an inhibitor of DNA gyrase with a novel mode of action. *Antimicrobial Agents and Chemotherapy*, **2005**, 49, 1093-100	5.9	95
35	RHL1 is an essential component of the plant DNA topoisomerase VI complex and is required for ploidy-dependent cell growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 18736-41	11.5	96
34	Arabidopsis thaliana DNA gyrase is targeted to chloroplasts and mitochondria. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 7821-6	11.5	124
33	Nucleotide binding to DNA gyrase causes loss of DNA wrap. *Journal of Molecular Biology*, **2004**, 337, 597-610	6.5	70
32	The ATP-binding site of type II topoisomerases as a target for antibacterial drugs. *Current Topics in Medicinal Chemistry*, **2003**, 3, 283-303	3	225

31	The role of GyrB in the DNA cleavage-religation reaction of DNA gyrase: a proposed two metal-ion mechanism. *Journal of Molecular Biology*, **2002**, 318, 361-71	6.5	83
30	The ATP-operated clamp of human DNA topoisomerase IIalpha: hyperstimulation of ATPase by "piggy-back" binding. *Journal of Molecular Biology*, **2002**, 320, 171-88	6.5	21
29	Interaction between DNA gyrase and quinolones: effects of alanine mutations at GyrA subunit residues Ser(83) and Asp(87). *Antimicrobial Agents and Chemotherapy*, **2001**, 45, 1994-2000	5.9	122
28	Enzymes that keep DNA under control. *EMBO Reports*, **2001**, 2, 271-276	6.5	1
27	Locking the ATP-operated clamp of DNA gyrase: probing the mechanism of strand passage. *Journal of Molecular Biology*, **2001**, 306, 969-84	6.5	57
26	Chimeric VEGFRs are activated by a small-molecule dimerizer and mediate downstream signalling cascades in endothelial cells. *Oncogene*, **2000**, 19, 5398-405	9.2	19
25	Temperature-sensitive suppressor mutations of the Escherichia coli DNA gyrase B protein. *Protein Science*, **2000**, 9, 1035-7	6.3	15
24	The complex of DNA gyrase and quinolone drugs on DNA forms a barrier to the T7 DNA polymerase replication complex. *Journal of Molecular Biology*, **2000**, 304, 779-91	6.5	63
23	The interaction of drugs with DNA gyrase: a model for the molecular basis of quinolone action. *Nucleosides, Nucleotides and Nucleic Acids*, **2000**, 19, 1249-64	1.4	63
22	Overexpression and purification of bacterial DNA gyrase. *Methods in Molecular Biology*, **1999**, 94, 135-44	1.4	40
21	Probing the binding of coumarins and cyclothialidines to DNA gyrase. *Biochemistry*, **1999**, 38, 1967-76	3.2	85
20	Probing the two-gate mechanism of DNA gyrase using cysteine cross-linking. *Biochemistry*, **1999**, 38, 13502-11	3.2	59
19	Locking the DNA gate of DNA gyrase: investigating the effects on DNA cleavage and ATP hydrolysis. *Biochemistry*, **1999**, 38, 14157-64	3.2	40
18	DNA gyrase as a drug target. *Biochemical Society Transactions*, **1999**, 27, A3-A3	5.1	
17	Identification of a residue involved in transition-state stabilization in the ATPase reaction of DNA gyrase. *Biochemistry*, **1998**, 37, 9658-67	3.2	41
16	The DNA gyrase-quinolone complex. ATP hydrolysis and the mechanism of DNA cleavage. *Journal of Biological Chemistry*, **1998**, 273, 22615-26	5.4	90
15	Use of a rapid throughput in vivo screen to investigate inhibitors of eukaryotic topoisomerase II enzymes. *Antimicrobial Agents and Chemotherapy*, **1998**, 42, 889-94	5.9	18
14	Exploiting nucleotide thiophosphates to probe mechanistic aspects of Escherichia coli DNA gyrase. *Biochemistry*, **1997**, 36, 6059-68	3.2	13

13	DNA gyrase as a drug target. *Trends in Microbiology*, **1997**, 5, 102-9	12.4	309
12	Crystal structure of the breakage-reunion domain of DNA gyrase. *Nature*, **1997**, 388, 903-6	50.4	405
11	The interaction of coumarin antibiotics with fragments of DNA gyrase B protein. *Biochemistry*, **1996**, 35, 5083-92	3.2	145
10	DNA cleavage is not required for the binding of quinolone drugs to the DNA gyrase-DNA complex. *Biochemistry*, **1996**, 35, 7387-93	3.2	82
9	Probing the role of the ATP-operated clamp in the strand-passage reaction of DNA gyrase. *Nucleic Acids Research*, **1996**, 24, 4868-73	20.1	77
8	Evidence for a conformational change in the DNA gyrase-DNA complex from hydroxyl radical footprinting. *Nucleic Acids Research*, **1994**, 22, 1567-75	20.1	84
7	The 24 kDa N-terminal sub-domain of the DNA gyrase B protein binds coumarin drugs. *Molecular Microbiology*, **1994**, 12, 365-73	4.1	70
6	The complex of DNA gyrase and quinolone drugs with DNA forms a barrier to transcription by RNA polymerase. *Journal of Molecular Biology*, **1994**, 242, 351-63	6.5	113
5	The 43-kilodalton N-terminal fragment of the DNA gyrase B protein hydrolyzes ATP and binds coumarin drugs. *Biochemistry*, **1993**, 32, 2717-24	3.2	307
4	The interaction between coumarin drugs and DNA gyrase. *Molecular Microbiology*, **1993**, 9, 681-6	4.1	222
3	gyrB mutations which confer coumarin resistance also affect DNA supercoiling and ATP hydrolysis by Escherichia coli DNA gyrase. *Molecular Microbiology*, **1992**, 6, 1617-24	4.1	102
2	Crystal structure of an N-terminal fragment of the DNA gyrase B protein. *Nature*, **1991**, 351, 624-9	50.4	512
1	DNA gyrase: structure and function. *Critical Reviews in Biochemistry and Molecular Biology*, **1991**, 26, 335-75	8.7	505