Mark P Brynildsen

List of Publications by Year
in descending order

57 papers	4,477 citations	201674 27 h-index	161849 54 g-index
64 all docs	64 docs citations	64 times ranked	4210 citing authors

#	Article	IF	Citations
1	Metabolite-enabled eradication of bacterial persisters by aminoglycosides. Nature, 2011, 473, 216-220.	27.8	787
2	Definitions and guidelines for research on antibiotic persistence. Nature Reviews Microbiology, 2019, 17, 441-448.	28.6	748
3	Potentiating antibacterial activity by predictably enhancing endogenous microbial ROS production. Nature Biotechnology, 2013, 31, 160-165.	17.5	375
4	Metabolic Control of Persister Formation in Escherichia coli. Molecular Cell, 2013, 50, 475-487.	9.7	353
5	Dormancy Is Not Necessary or Sufficient for Bacterial Persistence. Antimicrobial Agents and Chemotherapy, 2013, 57, 3230-3239.	3.2	219
6	The role of metabolism in bacterial persistence. Frontiers in Microbiology, 2014, 5, 70.	3.5	193
7	Heterogeneous bacterial persisters and engineering approaches to eliminate them. Current Opinion in Microbiology, 2011, 14, 593-598.	5.1	175
8	Persister Heterogeneity Arising from a Single Metabolic Stress. Current Biology, 2015, 25, 2090-2098.	3.9	124
9	Enhanced antibiotic resistance development from fluoroquinolone persisters after a single exposure to antibiotic. Nature Communications, 2019, 10, 1177.	12.8	124
10	Establishment of a Method To Rapidly Assay Bacterial Persister Metabolism. Antimicrobial Agents and Chemotherapy, 2013, 57, 4398-4409.	3.2	110
11	Inhibition of stationary phase respiration impairs persister formation in E. coli. Nature Communications, 2015, 6, 7983.	12.8	110
12	Stationary-Phase Persisters to Ofloxacin Sustain DNA Damage and Require Repair Systems Only during Recovery. MBio, 2015, 6, e00731-15.	4.1	100
13	Nutrient Transitions Are a Source of Persisters in Escherichia coli Biofilms. PLoS ONE, 2014, 9, e93110.	2.5	93
14	Timing of DNA damage responses impacts persistence to fluoroquinolones. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E6301-E6309.	7.1	77
15	A Kinetic Platform to Determine the Fate of Nitric Oxide in Escherichia coli. PLoS Computational Biology, 2013, 9, e1003049.	3.2	65
16	Deciphering nitric oxide stress in bacteria with quantitative modeling. Current Opinion in Microbiology, 2014, 19, 16-24.	5.1	56
17	Futile cycling increases sensitivity toward oxidative stress in Escherichia coli. Metabolic Engineering, 2015, 29, 26-35.	7.0	56
18	RNA Futile Cycling in Model Persisters Derived from MazF Accumulation. MBio, 2015, 6, e01588-15.	4.1	48

#	Article	IF	Citations
19	Development of Persister-FACSeq: a method to massively parallelize quantification of persister physiology and its heterogeneity. Scientific Reports, 2016, 6, 25100.	3.3	47
20	Impacts of Global Transcriptional Regulators on Persister Metabolism. Antimicrobial Agents and Chemotherapy, 2015, 59, 2713-2719.	3.2	37
21	A Kinetic Platform to Determine the Fate of Hydrogen Peroxide in Escherichia coli. PLoS Computational Biology, 2015, 11, e1004562.	3.2	37
22	Persister formation in Escherichia coli can be inhibited by treatment with nitric oxide. Free Radical Biology and Medicine, 2016, 93, 145-154.	2.9	34
23	Discovery and dissection of metabolic oscillations in the microaerobic nitric oxide response network of <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1757-66.	7.1	33
24	Loss of DksA leads to multi-faceted impairment of nitric oxide detoxification by Escherichia coli. Free Radical Biology and Medicine, 2019, 130, 288-296.	2.9	32
25	An ensemble-guided approach identifies ClpP as a major regulator of transcript levels in nitric oxide-stressed Escherichia coli. Metabolic Engineering, 2015, 31, 22-34.	7.0	30
26	Construction and Experimental Validation of a Quantitative Kinetic Model of Nitric Oxide Stress in Enterohemorrhagic Escherichia coli O157:H7. Bioengineering, 2016, 3, 9.	3.5	28
27	Rifamycin antibiotics and the mechanisms of their failure. Journal of Antibiotics, 2021, 74, 786-798.	2.0	25
28	Model-driven identification of dosing regimens that maximize the antimicrobial activity of nitric oxide. Metabolic Engineering Communications, 2014, 1, 12-18.	3.6	23
29	Ploidy is an important determinant of fluoroquinolone persister survival. Current Biology, 2021, 31, 2039-2050.e7.	3.9	23
30	A biochemical engineering view of the quest for immune-potentiating anti-infectives. Current Opinion in Chemical Engineering, 2016, 14, 82-92.	7.8	21
31	Transcriptional Regulation Contributes to Prioritized Detoxification of Hydrogen Peroxide over Nitric Oxide. Journal of Bacteriology, 2019, 201, .	2.2	16
32	An integrated network analysis reveals that nitric oxide reductase prevents metabolic cycling of nitric oxide by Pseudomonas aeruginosa. Metabolic Engineering, 2017, 41, 67-81.	7.0	15
33	Analyzing Persister Physiology with Fluorescence-Activated Cell Sorting. Methods in Molecular Biology, 2016, 1333, 83-100.	0.9	13
34	Stationary phase persister formation in Escherichia coli can be suppressed by piperacillin and PBP3 inhibition. BMC Microbiology, 2019, 19, 140.	3.3	13
35	Phagosomeâ€“Bacteria Interactions from the Bottom Up. Annual Review of Chemical and Biomolecular Engineering, 2021, 12, 309-331.	6.8	13
36	Aminoglycosideâ€Enabled Elucidation of Bacterial Persister Metabolism. Current Protocols in Microbiology, 2015, 36, 17.9.1-17.9.14.	6.5	10

#	Article	IF	Citations
37	Systems Biology Makes It Personal. Molecular Cell, 2009, 34, 137-138.	9.7	9
38	Non-Monotonic Survival of Staphylococcus aureus with Respect to Ciprofloxacin Concentration Arises from Prophage-Dependent Killing of Persisters. Pharmaceuticals, 2015, 8, 778-792.	3.8	8
39	Quantitative Modeling Extends the Antibacterial Activity of Nitric Oxide. Frontiers in Physiology, 2020, 11, 330.	2.8	8
40	Metabolites Potentiate Nitrofurans in Nongrowing Escherichia coli. Antimicrobial Agents and Chemotherapy, 2021, 65, .	3.2	8
41	Toxin Induction or Inhibition of Transcription or Translation Posttreatment Increases Persistence to Fluoroquinolones. MBio, 2021, 12, e0198321.	4.1	8
42	Starved Escherichia coli preserve reducing power under nitric oxide stress. Biochemical and Biophysical Research Communications, 2016, 476, 29-34.	2.1	7
43	Synergy Screening Identifies a Compound That Selectively Enhances the Antibacterial Activity of Nitric Oxide. Frontiers in Bioengineering and Biotechnology, 2020, 8, 1001.	4.1	7
44	An integrated network analysis identifies how ArcAB enables metabolic oscillations in the nitric oxide detoxification network of Escherichia coli. Biotechnology Journal, 2017, 12, 1600570.	3.5	6
45	Robustness of nitric oxide detoxification to nitrogen starvation in Escherichia coli requires RelA. Free Radical Biology and Medicine, 2021, 176, 286-297.	2.9	5
46	Checks and Balances with Use of the Keio Collection for Phenotype Testing. Methods in Molecular Biology, 2019, 1927, 125-138.	0.9	4
47	Biased inheritance protects older bacteria from harm. Science, 2017, 356, 247-248.	12.6	3
48	Quantifying Nitric Oxide Flux Distributions. Methods in Molecular Biology, 2020, 2088, 161-188.	0.9	3
49	Nutrient Depletion and Bacterial Persistence. , 2019, , 99-132.		3
50	An Orphan Riboswitch Unveils Guanidine Regulation in Bacteria. Molecular Cell, 2017, 65, 205-206.	9.7	2
51	Tackling hostâ€“circuit give and take. Nature Microbiology, 2017, 2, 1584-1585.	13.3	1
52	Pseudomonas aeruginosa prioritizes detoxification of hydrogen peroxide over nitric oxide. BMC Research Notes, 2021, 14, 120.	1.4	1
53	Fluoroquinolone Persistence in Escherichia coli Requires DNA Repair despite Differing between Starving Populations. Microorganisms, 2022, 10, 286.	3.6	1
54	Translational Fusion to Hmp Improves Heterologous Protein Expression. Microorganisms, 2022, 10, 358.	3.6	1

#	Article	IF	Citations
55	Quantifying Current Events Identifies a Novel Endurance Regulator. Trends in Microbiology, 2016, 24, 324-326.	7.7	0
56	Nitric Oxide Stress as a Metabolic Flux. Advances in Microbial Physiology, 2018, 73, 63-76.	2.4	0
57	Counting Chromosomes in Individual Bacteria to Quantify Their Impacts on Persistence. Methods in Molecular Biology, 2021, 2357, 125-146.	0.9	0