

# Mary J Dunlop

## List of Publications by Year in descending order

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Version: 2024-02-01

45  
papers

2,437  
citations

304743

22  
h-index

265206

42  
g-index

59  
all docs

59  
docs citations

59  
times ranked

2842  
citing authors

#	ARTICLE	IF	CITATIONS
1	DeLTA 2.0: A deep learning pipeline for quantifying single-cell spatial and temporal dynamics. PLoS Computational Biology, 2022, 18, e1009797.	3.2	43
2	Anticipating antibiotic resistance. Science, 2022, 375, 818-819.	12.6	3
3	Dynamic gene expression and growth underlie cell-to-cell heterogeneity in <i>Escherichia coli</i> stress response. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2115032119.	7.1	33
4	Transcriptional Tuning of Mevalonate Pathway Enzymes to Identify the Impact on Limonene Production in <i>Escherichia coli</i> . ACS Omega, 2022, 7, 18331-18338.	3.5	6
5	Microsecond fingerprint stimulated Raman spectroscopic imaging by ultrafast tuning and spatial-spectral learning. Nature Communications, 2021, 12, 3052.	12.8	58
6	Programmable gene regulation for metabolic engineering using decoy transcription factor binding sites. Nucleic Acids Research, 2021, 49, 1163-1172.	14.5	29
7	Functional roles of microbial cell-to-cell heterogeneity and emerging technologies for analysis and control. Current Opinion in Microbiology, 2020, 57, 87-94.	5.1	19
8	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. Annals of Biomedical Engineering, 2020, 48, 905-912.	2.5	37
9	Light-Inducible Recombinases for Bacterial Optogenetics. ACS Synthetic Biology, 2020, 9, 227-235.	3.8	42
10	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. PLoS Computational Biology, 2020, 16, e1007673.	3.2	137
11	Mapping the Role of AcrAB-TolC Efflux Pumps in the Evolution of Antibiotic Resistance Reveals Near-MIC Treatments Facilitate Resistance Acquisition. MSphere, 2020, 5, .	2.9	14
12	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0
13	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0
14	DeLTA: Automated cell segmentation, tracking, and lineage reconstruction using deep learning. , 2020, 16, e1007673.		0
15	Forecasting cell fate during antibiotic exposure using stochastic gene expression. Communications Biology, 2019, 2, 259.	4.4	15
16	Salicylate Increases Fitness Cost Associated with MarA-Mediated Antibiotic Resistance. Biophysical Journal, 2019, 117, 563-571.	0.5	10
17	Cell-machine interfaces for characterizing gene regulatory network dynamics. Current Opinion in Systems Biology, 2019, 14, 1-8.	2.6	31
18	Distinct timescales of RNA regulators enable the construction of a genetic pulse generator. Biotechnology and Bioengineering, 2019, 116, 1139-1151.	3.3	40

#	ARTICLE	IF	CITATIONS
19	Controlling and exploiting cell-to-cell variation in metabolic engineering. <i>Current Opinion in Biotechnology</i> , 2019, 57, 10-16.	6.6	27
20	Making Waves with Synthetic Oscillators. <i>Cell Systems</i> , 2018, 6, 406-407.	6.2	6
21	Mathematical Modeling of RNA-Based Architectures for Closed Loop Control of Gene Expression. <i>ACS Synthetic Biology</i> , 2018, 7, 1219-1228.	3.8	42
22	Design and Selection of a Synthetic Feedback Loop for Optimizing Biofuel Tolerance. <i>ACS Synthetic Biology</i> , 2018, 7, 16-23.	3.8	47
23	Stress Introduction Rate Alters the Benefit of AcrAB-TolC Efflux Pumps. <i>Journal of Bacteriology</i> , 2018, 200, .	2.2	27
24	Heterogeneity in efflux pump expression predisposes antibiotic-resistant cells to mutation. <i>Science</i> , 2018, 362, 686-690.	12.6	178
25	Active degradation of MarA controls coordination of its downstream targets. <i>PLoS Computational Biology</i> , 2018, 14, e1006634.	3.2	10
26	Antibiotic export by efflux pumps affects growth of neighboring bacteria. <i>Scientific Reports</i> , 2018, 8, 15120.	3.3	18
27	Bacterial persistence induced by salicylate via reactive oxygen species. <i>Scientific Reports</i> , 2017, 7, 43839.	3.3	51
28	Expression of Heterologous Sigma Factor Expands the Searchable Space for Biofuel Tolerance Mechanisms. <i>ACS Synthetic Biology</i> , 2017, 6, 1343-1350.	3.8	10
29	Customized Regulation of Diverse Stress Response Genes by the Multiple Antibiotic Resistance Activator MarA. <i>PLoS Computational Biology</i> , 2017, 13, e1005310.	3.2	17
30	Phenotypic Diversity Using Bimodal and Unimodal Expression of Stress Response Proteins. <i>Biophysical Journal</i> , 2016, 110, 2278-2287.	0.5	6
31	Stochastic expression of a multiple antibiotic resistance activator confers transient resistance in single cells. <i>Scientific Reports</i> , 2016, 6, 19538.	3.3	85
32	Performing selections under dynamic conditions for synthetic biology applications. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 556-563.	1.3	1
33	Engineering improved bio-jet fuel tolerance in <i>Escherichia coli</i> using a transgenic library from the hydrocarbon-degrader <i>Marinobacter aquaeolei</i> . <i>Biotechnology for Biofuels</i> , 2015, 8, 165.	6.2	22
34	Noise and Low-Level Dynamics Can Coordinate Multicomponent Bet Hedging Mechanisms. <i>Biophysical Journal</i> , 2015, 108, 184-193.	0.5	15
35	Trade-Offs in Improving Biofuel Tolerance Using Combinations of Efflux Pumps. <i>ACS Synthetic Biology</i> , 2015, 4, 1056-1063.	3.8	61
36	Development of a Native <i>Escherichia coli</i> Induction System for Ionic Liquid Tolerance. <i>PLoS ONE</i> , 2014, 9, e101115.	2.5	31

#	ARTICLE	IF	CITATIONS
37	Quantitative Single-Cell Gene Expression Measurements in Bacteria Using Time-Lapse Microscopy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1174-1175.	0.4	2
38	Tunable Stochastic Pulsing in the Escherichia coli Multiple Antibiotic Resistance Network from Interlinked Positive and Negative Feedback Loops. <i>PLoS Computational Biology</i> , 2013, 9, e1003229.	3.2	41
39	Synthetic Feedback Loop Model for Increasing Microbial Biofuel Production Using a Biosensor. <i>Frontiers in Microbiology</i> , 2012, 3, 360.	3.5	43
40	Engineering microbial biofuel tolerance and export using efflux pumps. <i>Molecular Systems Biology</i> , 2011, 7, 487.	7.2	440
41	Engineering microbes for tolerance to next-generation biofuels. <i>Biotechnology for Biofuels</i> , 2011, 4, 32.	6.2	246
42	A model for improving microbial biofuel production using a synthetic feedback loop. <i>Systems and Synthetic Biology</i> , 2010, 4, 95-104.	1.0	127
43	A synthetic three-color scaffold for monitoring genetic regulation and noise. <i>Journal of Biological Engineering</i> , 2010, 4, 10.	4.7	67
44	Regulatory activity revealed by dynamic correlations in gene expression noise. <i>Nature Genetics</i> , 2008, 40, 1493-1498.	21.4	210
45	Multiple Functions of a Feed-Forward-Loop Gene Circuit. <i>Journal of Molecular Biology</i> , 2005, 349, 501-514.	4.2	75