Dianne K Newman

List of Publications by Year
in descending order

94 papers	8,344 citations	71004 43 h-index	58552 86 g-index
129 all docs	129 docs citations	129 times ranked	9088 citing authors

#	Article	IF	Citations
1	The phenazine pyocyanin is a terminal signalling factor in the quorum sensing network of Pseudomonas aeruginosa. Molecular Microbiology, 2006, 61, 1308-1321.	1.2	639
2	Rethinking 'secondary' metabolism: physiological roles for phenazine antibiotics. Nature Chemical Biology, 2006, 2, 71-78.	3.9	483
3	Redox-Active Antibiotics Control Gene Expression and Community Behavior in Divergent Bacteria. Science, 2008, 321, 1203-1206.	6.0	394
4	Phenazines and Other Redox-Active Antibiotics Promote Microbial Mineral Reduction. Applied and Environmental Microbiology, 2004, 70, 921-928.	1.4	363
5	Pyocyanin Alters Redox Homeostasis and Carbon Flux through Central Metabolic Pathways in Pseudomonas aeruginosa PA14. Journal of Bacteriology, 2007, 189, 6372-6381.	1.0	291
6	Bacterial Community Morphogenesis Is Intimately Linked to the Intracellular Redox State. Journal of Bacteriology, 2013, 195, 1371-1380.	1.0	268
7	Biosynthesis of 2-methylbacteriohopanepolyols by an anoxygenic phototroph. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 15099-15104.	3.3	251
8	Endogenous Phenazine Antibiotics Promote Anaerobic Survival of <i>Pseudomonas aeruginosa</i> via Extracellular Electron Transfer. Journal of Bacteriology, 2010, 192, 365-369.	1.0	251
9	Redox Reactions of Phenazine Antibiotics with Ferric (Hydr)oxides and Molecular Oxygen. Environmental Science & Technology, 2008, 42, 2380-2386.	4.6	246
10	Marine Tubeworm Metamorphosis Induced by Arrays of Bacterial Phage Tailâ€"Like Structures. Science, 2014, 343, 529-533.	6.0	223
11	Mapping a multiplexed zoo of mRNA expression. Development (Cambridge), 2016, 143, 3632-3637.	1.2	198
12	Phenazine-1-Carboxylic Acid Promotes Bacterial Biofilm Development via Ferrous Iron Acquisition. Journal of Bacteriology, 2011, 193, 3606-3617.	1.0	196
13	Identification of a methylase required for 2-methylhopanoid production and implications for the interpretation of sedimentary hopanes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8537-8542.	3.3	191
14	Phenazine redox cycling enhances anaerobic survival in <scp><i>P</i></scp><i>seudomonas aeruginosa</i> by facilitating generation of <scp>ATP</scp> and a protonâ€motive force. Molecular Microbiology, 2014, 92, 399-412.	1.2	190
15	Hopanoids Play a Role in Membrane Integrity and pH Homeostasis in <i>Rhodopseudomonas palustris</i> TIE-1. Journal of Bacteriology, 2009, 191, 6145-6156.	1.0	189
16	The Colorful World of Extracellular Electron Shuttles. Annual Review of Microbiology, 2017, 71, 731-751.	2.9	181
17	The physiology of growth arrest: uniting molecular and environmental microbiology. Nature Reviews Microbiology, 2016, 14, 549-562.	13.6	176
18	Extracellular DNA Promotes Efficient Extracellular Electron Transfer by Pyocyanin in Pseudomonas aeruginosa Biofilms. Cell, 2020, 182, 919-932.e19.	13.5	166

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19	Anaerobic Bacteria Grow within Candida albicans Biofilms and Induce Biofilm Formation in Suspension Cultures. Current Biology, 2014, 24, 2411-2416.	1.8	164
20	Phenazine Content in the Cystic Fibrosis Respiratory Tract Negatively Correlates with Lung Function and Microbial Complexity. American Journal of Respiratory Cell and Molecular Biology, 2012, 47, 738-745.	1.4	158
21	Hopanoid lipids: from membranes to plantâ€"bacteria interactions. Nature Reviews Microbiology, 2018, 16, 304-315.	13.6	147
22	Phenazines affect biofilm formation by Pseudomonas aeruginosa in similar ways at various scales. Research in Microbiology, 2010, 161, 187-191.	1.0	143
23	Spatial transcriptomics of planktonic and sessile bacterial populations at single-cell resolution. Science, 2021, 373, .	6.0	140
24	Pediatric Cystic Fibrosis Sputum Can Be Chemically Dynamic, Anoxic, and Extremely Reduced Due to Hydrogen Sulfide Formation. MBio, 2015, 6, e00767.	1.8	137
25	Spatiometabolic Stratification of Shewanella oneidensis Biofilms. Applied and Environmental Microbiology, 2006, 72, 7324-7330.	1.4	134
26	Exposing the Three-Dimensional Biogeography and Metabolic States of Pathogens in Cystic Fibrosis Sputum via Hydrogel Embedding, Clearing, and rRNA Labeling. MBio, 2016, 7, .	1.8	112
27	Trace incorporation of heavy water reveals slow and heterogeneous pathogen growth rates in cystic fibrosis sputum. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E110-6.	3.3	104
28	Both toxic and beneficial effects of pyocyanin contribute to the lifecycle of <i>Pseudomonas aeruginosa</i>. Molecular Microbiology, 2018, 110, 995-1010.	1.2	95
29	Heavy water and ¹⁵<scp>N</scp> labelling with <scp>N</scp>ano<scp>SIMS</scp> analysis reveals growth rateâ€dependent metabolic heterogeneity in chemostats. Environmental Microbiology, 2015, 17, 2542-2556.	1.8	94
30	Polyphosphate granule biogenesis is temporally and functionally tied to cell cycle exit during starvation in <i>Pseudomonas aeruginosa</i>. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2440-E2449.	3.3	93
31	Protective Role of tolC in Efflux of the Electron Shuttle Anthraquinone-2,6-Disulfonate. Journal of Bacteriology, 2002, 184, 1806-1810.	1.0	89
32	Covalently linked hopanoid-lipid A improves outer-membrane resistance of a Bradyrhizobium symbiont of legumes. Nature Communications, 2014, 5, 5106.	5.8	88
33	Diverse capacity for 2-methylhopanoid production correlates with a specific ecological niche. ISME Journal, 2014, 8, 675-684.	4.4	85
34	Structural and mechanistic analysis of the arsenate respiratory reductase provides insight into environmental arsenic transformations. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8614-E8623.	3.3	74
35	Redox-active antibiotics enhance phosphorus bioavailability. Science, 2021, 371, 1033-1037.	6.0	67
36	Stepwise metamorphosis of the tubeworm <i>Hydroides elegans</i> is mediated by a bacterial inducer and MAPK signaling. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10097-10102.	3.3	63

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37	Anaerobic regulation by an atypical Arc system in Shewanella oneidensis. Molecular Microbiology, 2005, 56, 1347-1357.	1.2	62
38	Specific Hopanoid Classes Differentially Affect Free-Living and Symbiotic States of <i>Bradyrhizobium diazoefficiens</i>. MBio, 2015, 6, e01251-15.	1.8	60
39	The General Stress Response Factor EcfG Regulates Expression of the C-2 Hopanoid Methylase HpnP in Rhodopseudomonas palustris TIE-1. Journal of Bacteriology, 2013, 195, 2490-2498.	1.0	59
40	The RND-family transporter, HpnN, is required for hopanoid localization to the outer membrane of <i>Rhodopseudomonas palustris</i> TIE-1. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E1045-51.	3.3	58
41	Identification and quantification of polyfunctionalized hopanoids by high temperature gas chromatographyâ€"mass spectrometry. Organic Geochemistry, 2013, 56, 120-130.	0.9	57
42	Pyocyanin degradation by a tautomerizing demethylase inhibits <i>Pseudomonas aeruginosa</i> biofilms. Science, 2017, 355, 170-173.	6.0	53
43	Enzymatic Degradation of Phenazines Can Generate Energy and Protect Sensitive Organisms from Toxicity. MBio, 2015, 6, e01520-15.	1.8	52
44	SutA is a bacterial transcription factor expressed during slow growth in <i>Pseudomonas aeruginosa</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E597-605.	3.3	52
45	A contractile injection system stimulates tubeworm metamorphosis by translocating a proteinaceous effector. ELife, 2019, 8, .	2.8	52
46	Identification of Fitness Determinants during Energy-Limited Growth Arrest in <i>Pseudomonas aeruginosa</i>. MBio, 2017, 8, .	1.8	45
47	Global landscape of phenazine biosynthesis and biodegradation reveals species-specific colonization patterns in agricultural soils and crop microbiomes. ELife, 2020, 9, .	2.8	44
48	From the soil to the clinic: the impact of microbial secondary metabolites on antibiotic tolerance and resistance. Nature Reviews Microbiology, 2022, 20, 129-142.	13.6	43
49	Probing the Subcellular Localization of Hopanoid Lipids in Bacteria Using NanoSIMS. PLoS ONE, 2014, 9, e84455.	1.1	41
50	Selective Proteomic Analysis of Antibiotic-Tolerant Cellular Subpopulations in <i>Pseudomonas aeruginosa</i> Biofilms. MBio, 2017, 8, .	1.8	40
51	Cellular and Molecular Biological Approaches to Interpreting Ancient Biomarkers. Annual Review of Earth and Planetary Sciences, 2016, 44, 493-522.	4.6	39
52	Methylation at the C-2 position of hopanoids increases rigidity in native bacterial membranes. ELife, 2015, 4, .	2.8	38
53	Extraction and Measurement of NAD(P)+ and NAD(P)H. Methods in Molecular Biology, 2014, 1149, 311-323.	0.4	35
54	Need for Laboratory Ecosystems To Unravel the Structures and Functions of Soil Microbial Communities Mediated by Chemistry. MBio, 2018, 9, .	1.8	34

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55	The Ferrous Iron-Responsive BqsRS Two-Component System Activates Genes That Promote Cationic Stress Tolerance. MBio, 2015, 6, e02549.	1.8	33
56	Heat-shock proteases promote survival of <i>Pseudomonas aeruginosa</i> during growth arrest. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4358-4367.	3.3	33
57	Bacterial defenses against a natural antibiotic promote collateral resilience to clinical antibiotics. PLoS Biology, 2021, 19, e3001093.	2.6	31
58	Computationally designed pyocyanin demethylase acts synergistically with tobramycin to kill recalcitrant <i>Pseudomonas aeruginosa</i> biofilms. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	31
59	Quantifying the Dynamics of Bacterial Secondary Metabolites by Spectral Multiphoton Microscopy. ACS Chemical Biology, 2011, 6, 893-899.	1.6	30
60	Fosmidomycin Decreases Membrane Hopanoids and Potentiates the Effects of Colistin on Burkholderia multivorans Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2014, 58, 5211-5219.	1.4	30
61	The Pyruvate and Î±-Ketoglutarate Dehydrogenase Complexes of Pseudomonas aeruginosa Catalyze Pyocyanin and Phenazine-1-carboxylic Acid Reduction via the Subunit Dihydrolipoamide Dehydrogenase. Journal of Biological Chemistry, 2017, 292, 5593-5607.	1.6	30
62	Keystone metabolites of crop rhizosphere microbiomes. Current Biology, 2020, 30, R1131-R1137.	1.8	28
63	A Conversation with James J. Morgan. Annual Review of Earth and Planetary Sciences, 2015, 43, 1-27.	4.6	26
64	Model Systems to Study the Chronic, Polymicrobial Infections in Cystic Fibrosis: Current Approaches and Exploring Future Directions. MBio, 2021, 12, e0176321.	1.8	26
65	Quantitative Visualization of Gene Expression in Mucoid and Nonmucoid Pseudomonas aeruginosa Aggregates Reveals Localized Peak Expression of Alginate in the Hypoxic Zone. MBio, 2019, 10, .	1.8	24
66	Chlorate Specifically Targets Oxidant-Starved, Antibiotic-Tolerant Populations of Pseudomonas aeruginosa Biofilms. MBio, 2018, 9, .	1.8	20
67	Aggregation of Nontuberculous Mycobacteria Is Regulated by Carbon-Nitrogen Balance. MBio, 2019, 10, .	1.8	19
68	PhdA Catalyzes the First Step of Phenazine-1-Carboxylic Acid Degradation in Mycobacterium fortuitum. Journal of Bacteriology, 2018, 200, .	1.0	17
69	The role of hopanoids in fortifying rhizobia against a changing climate. Environmental Microbiology, 2021, 23, 2906-2918.	1.8	17
70	The Potential for Redox-Active Metabolites To Enhance or Unlock Anaerobic Survival Metabolisms in Aerobes. Journal of Bacteriology, 2020, 202, .	1.0	16
71	Refinement of metabolite detection in cystic fibrosis sputum reveals heme correlates with lung function decline. PLoS ONE, 2019, 14, e0226578.	1.1	15
72	Refining the Application of Microbial Lipids as Tracers of Staphylococcus aureus Growth Rates in Cystic Fibrosis Sputum. Journal of Bacteriology, 2018, 200, .	1.0	13

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73	Towards measuring growth rates of pathogens during infections by D₂Oâ€labeling lipidomics. Rapid Communications in Mass Spectrometry, 2018, 32, 2129-2140.	0.7	13
74	The transcription factors ActR and SoxR differentially affect the phenazine tolerance of Agrobacterium tumefaciens. Molecular Microbiology, 2019, 112, 199-218.	1.2	13
75	Evidence of a Streamlined Extracellular Electron Transfer Pathway from Biofilm Structure, Metabolic Stratification, and Long-Range Electron Transfer Parameters. Applied and Environmental Microbiology, 2021, 87, e0070621.	1.4	13
76	The dormancyâ€specific regulator, SutA, is intrinsically disordered and modulates transcription initiation in <i>Pseudomonas aeruginosa</i>. Molecular Microbiology, 2019, 112, 992-1009.	1.2	11
77	Predicting the impact of promoter variability on regulatory outputs. Scientific Reports, 2016, 5, 18238.	1.6	9
78	Extracellular Electron Transfer Transcends Microbe-Mineral Interactions. Cell Host and Microbe, 2018, 24, 611-613.	5.1	9
79	Extended Hopanoid Loss Reduces Bacterial Motility and Surface Attachment and Leads to Heterogeneity in Root Nodule Growth Kinetics in a <i>Bradyrhizobium-Aeschynomene</i> Symbiosis. Molecular Plant-Microbe Interactions, 2019, 32, 1415-1428.	1.4	9
80	The Yin and Yang of Phenazine Physiology. , 2013, , 43-69.		8
81	Soil bacteria protect fungi from phenazines by acting as toxin sponges. Current Biology, 2022, 32, 275-288.e5.	1.8	8
82	Phenazines and toxoflavin act as interspecies modulators of resilience to diverse antibiotics. Molecular Microbiology, 2022, 117, 1384-1404.	1.2	7
83	Nitrate Reduction Stimulates and Is Stimulated by Phenazine-1-Carboxylic Acid Oxidation by Citrobacter portucalensis MBL. MBio, 2021, 12, e0226521.	1.8	6
84	Draft Genome Sequence of the Redox-Active Enteric Bacterium Citrobacter portucalensis Strain MBL. Microbiology Resource Announcements, 2020, 9, .	0.3	5
85	Visualization of mRNA Expression in Pseudomonas aeruginosa Aggregates Reveals Spatial Patterns of Fermentative and Denitrifying Metabolism. Applied and Environmental Microbiology, 2022, 88, e0043922.	1.4	5
86	Prevalence and Correlates of Phenazine Resistance in Culturable Bacteria from a Dryland Wheat Field. Applied and Environmental Microbiology, 2022, 88, aem0232021.	1.4	4
87	Hopanoids Confer Robustness to Physicochemical Variability in the Niche of the Plant Symbiont Bradyrhizobium diazoefficiens. Journal of Bacteriology, 2022, 204, .	1.0	4
88	Complete Genome Sequence of <i>Curtobacterium</i> sp. Strain MR_MD2014, Isolated from Topsoil in Woods Hole, Massachusetts. Genome Announcements, 2015, 3, .	0.8	3
89	Draft Genome Sequence of the Iridescent Marine Bacterium Tenacibaculum discolor Strain IMLK18. Microbiology Resource Announcements, 2019, 8, .	0.3	2
90	Microbial communities: The metabolic rate is the trait. Current Biology, 2022, 32, R215-R218.	1.8	2

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91	Complete Genome Sequence of <i>Streptomyces</i> sp. Strain CCM_MD2014, Isolated from Topsoil in Woods Hole, Massachusetts. Genome Announcements, 2015, 3, .	0.8	1
92	A personal tribute to Terry Beveridge. Canadian Journal of Microbiology, 2018, 64, ix-xi.	0.8	0
93	Draft Genome Sequence of the Free-Living, Iridescent Bacterium Tenacibaculum mesophilum Strain ECR. Microbiology Resource Announcements, 2021, 10, .	0.3	0
94	From Geocycles to Genomes and Back. , 0, , 11-P1.		0