

# Martin Ackermann

## List of Publications by Year in descending order

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99  
papers

9,824  
citations

50276

46  
h-index

45317

90  
g-index

119  
all docs

119  
docs citations

119  
times ranked

11924  
citing authors

#	ARTICLE	IF	CITATIONS
1	Global dynamics of microbial communities emerge from local interaction rules. PLoS Computational Biology, 2022, 18, e1009877.	3.2	13
2	Dynamic character displacement among a pair of bacterial phyllosphere commensals in situ. Nature Communications, 2022, 13, .	12.8	15
3	Plasmid- and strain-specific factors drive variation in ESBL-plasmid spread in vitro and in vivo. ISME Journal, 2021, 15, 862-878.	9.8	66
4	Rapid evolution destabilizes species interactions in a fluctuating environment. ISME Journal, 2021, 15, 450-460.	9.8	24
5	Nutrient complexity triggers transitions between solitary and colonial growth in bacterial populations. ISME Journal, 2021, 15, 2614-2626.	9.8	36
6	Short-range quorum sensing controls horizontal gene transfer at micron scale in bacterial communities. Nature Communications, 2021, 12, 2324.	12.8	57
7	A distinct growth physiology enhances bacterial growth under rapid nutrient fluctuations. Nature Communications, 2021, 12, 3662.	12.8	40
8	Microbiota-derived metabolites inhibit <i>Salmonella</i> virulent subpopulation development by acting on single-cell behaviors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
9	Quantification of the spread of SARS-CoV-2 variant B.1.1.7 in Switzerland. Epidemics, 2021, 37, 100480.	3.0	34
10	Microfluidics for Single-Cell Study of Antibiotic Tolerance and Persistence Induced by Nutrient Limitation. Methods in Molecular Biology, 2021, 2357, 107-124.	0.9	3
11	Stochastic Gene Expression Influences the Selection of Antibiotic Resistance Mutations. Molecular Biology and Evolution, 2020, 37, 58-70.	8.9	8
12	Environmental drivers of metabolic heterogeneity in clonal microbial populations. Current Opinion in Biotechnology, 2020, 62, 202-211.	6.6	40
13	Wide lag time distributions break a trade-off between reproduction and survival in bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18729-18736.	7.1	72
14	Understanding the evolution of interspecies interactions in microbial communities. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190256.	4.0	68
15	Short-range interactions govern the dynamics and functions of microbial communities. Nature Ecology and Evolution, 2020, 4, 366-375.	7.8	172
16	Dissection of the mutation accumulation process during bacterial range expansions. BMC Genomics, 2020, 21, 253.	2.8	8
17	Microbial life cycles link global modularity in regulation to mosaic evolution. Nature Ecology and Evolution, 2019, 3, 1184-1196.	7.8	18
18	Mutational and Selective Processes Involved in Evolution during Bacterial Range Expansions. Molecular Biology and Evolution, 2019, 36, 2313-2327.	8.9	11

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19	Metabolic activity affects the response of single cells to a nutrient switch in structured populations. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20190182.	3.4	36
20	Emergent microscale gradients give rise to metabolic cross-feeding and antibiotic tolerance in clonal bacterial populations. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2019, 374, 20190080.	4.0	74
21	Disseminating antibiotic resistance during treatment. <i>Science</i> , 2019, 364, 737-738.	12.6	36
22	Why microbes secrete molecules to modify their environment: the case of iron-chelating siderophores. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20180674.	3.4	61
23	Definitions and guidelines for research on antibiotic persistence. <i>Nature Reviews Microbiology</i> , 2019, 17, 441-448.	28.6	748
24	Individual versus group optimality in the production of secreted bacterial compounds. <i>Evolution; International Journal of Organic Evolution</i> , 2019, 73, 675-688.	2.3	21
25	The rate of environmental fluctuations shapes ecological dynamics in a two-species microbial system. <i>Ecology Letters</i> , 2019, 22, 838-846.	6.4	35
26	Spatially Correlated Gene Expression in Bacterial Groups: The Role of Lineage History, Spatial Gradients, and Cell-Cell Interactions. <i>Cell Systems</i> , 2018, 6, 496-507.e6.	6.2	59
27	Function and functional redundancy in microbial systems. <i>Nature Ecology and Evolution</i> , 2018, 2, 936-943.	7.8	912
28	Phylogenetic clustering of small low nucleic acid-content bacteria across diverse freshwater ecosystems. <i>ISME Journal</i> , 2018, 12, 1344-1359.	9.8	84
29	Prolonged bacterial lag time results in small colony variants that represent a sub-population of persisters. <i>Nature Communications</i> , 2018, 9, 4074.	12.8	109
30	Division of labor in bacteria. <i>ELife</i> , 2018, 7, .	6.0	7
31	Effective polyploidy causes phenotypic delay and influences bacterial evolvability. <i>PLoS Biology</i> , 2018, 16, e2004644.	5.6	37
32	Thiouridine residues in tRNAs are responsible for a synergistic effect of UVA and UVB light in photoinactivation of <i>Escherichia coli</i> . <i>Environmental Microbiology</i> , 2017, 19, 434-442.	3.8	33
33	Inflammation boosts bacteriophage transfer between <i>Salmonella</i> spp.. <i>Science</i> , 2017, 355, 1211-1215.	12.6	160
34	Accumulation of Deleterious Mutations During Bacterial Range Expansions. <i>Genetics</i> , 2017, 207, 669-684.	2.9	74
35	Stochastic gene expression: bacterial elites in chemotaxis. <i>Molecular Systems Biology</i> , 2017, 13, 909.	7.2	4
36	Asymmetric cellular memory in bacteria exposed to antibiotics. <i>BMC Evolutionary Biology</i> , 2017, 17, 73.	3.2	12

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37	A passive mutualistic interaction promotes the evolution of spatial structure within microbial populations. <i>BMC Evolutionary Biology</i> , 2017, 17, 106.	3.2	41
38	Magnitude and Mechanism of Siderophore-Mediated Competition at Low Iron Solubility in the <i>Pseudomonas aeruginosa</i> Pyochelin System. <i>Frontiers in Microbiology</i> , 2017, 8, 1964.	3.5	32
39	Cell-to-cell variation and specialization in sugar metabolism in clonal bacterial populations. <i>PLoS Genetics</i> , 2017, 13, e1007122.	3.5	58
40	Genetic Manipulation of Glycogen Allocation Affects Replicative Lifespan in <i>E. coli</i> . <i>PLoS Genetics</i> , 2016, 12, e1005974.	3.5	10
41	How type 1 fimbriae help <i>Escherichia coli</i> to evade extracellular antibiotics. <i>Scientific Reports</i> , 2016, 6, 18109.	3.3	47
42	The Microbial Olympics 2016. <i>Nature Microbiology</i> , 2016, 1, 16122.	13.3	7
43	Phenotypic heterogeneity driven by nutrient limitation promotes growth in fluctuating environments. <i>Nature Microbiology</i> , 2016, 1, 16055.	13.3	154
44	Response of single bacterial cells to stress gives rise to complex history dependence at the population level. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4224-4229.	7.1	58
45	A growing focus on bacterial individuality. <i>Environmental Microbiology</i> , 2015, 17, 2193-2195.	3.8	14
46	Phenotypic heterogeneity in metabolic traits among single cells of a rare bacterial species in its natural environment quantified with a combination of flow cell sorting and NanoSIMS. <i>Frontiers in Microbiology</i> , 2015, 06, 243.	3.5	72
47	Bacterial Ventures into Multicellularity: Collectivism through Individuality. <i>PLoS Biology</i> , 2015, 13, e1002162.	5.6	22
48	Association of Biodiversity with the Rates of Micropollutant Biotransformations among Full-Scale Wastewater Treatment Plant Communities. <i>Applied and Environmental Microbiology</i> , 2015, 81, 666-675.	3.1	98
49	A functional perspective on phenotypic heterogeneity in microorganisms. <i>Nature Reviews Microbiology</i> , 2015, 13, 497-508.	28.6	709
50	The usefulness of evolutionary principles: predicting the unexpected. <i>Environmental Microbiology Reports</i> , 2015, 7, 4-5.	2.4	0
51	Costs of antibiotic resistance – separating trait effects and selective effects. <i>Evolutionary Applications</i> , 2015, 8, 261-272.	3.1	39
52	Bistable Expression of Virulence Genes in <i>Salmonella</i> Leads to the Formation of an Antibiotic-Tolerant Subpopulation. <i>PLoS Biology</i> , 2014, 12, e1001928.	5.6	172
53	Cecum Lymph Node Dendritic Cells Harbor Slow-Growing Bacteria Phenotypically Tolerant to Antibiotic Treatment. <i>PLoS Biology</i> , 2014, 12, e1001793.	5.6	139
54	A Synthetic Community Approach Reveals Plant Genotypes Affecting the Phyllosphere Microbiota. <i>PLoS Genetics</i> , 2014, 10, e1004283.	3.5	369

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55	Phenotypic plasticity influences the eco-evolutionary dynamics of a predator-prey system. <i>Ecology</i> , 2014, 95, 3080-3092.	3.2	39
56	Antibiotic Treatment Selects for Cooperative Virulence of <i>Salmonella Typhimurium</i> . <i>Current Biology</i> , 2014, 24, 2000-2005.	3.9	87
57	Habitat structure and the evolution of diffusible siderophores in bacteria. <i>Ecology Letters</i> , 2014, 17, 1536-1544.	6.4	98
58	The predictability of molecular evolution during functional innovation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3044-3049.	7.1	69
59	Antagonism between Bacteriostatic and Bactericidal Antibiotics Is Prevalent. <i>Antimicrobial Agents and Chemotherapy</i> , 2014, 58, 4573-4582.	3.2	198
60	Analysis of fluorescent reporters indicates heterogeneity in glucose uptake and utilization in clonal bacterial populations. <i>BMC Microbiology</i> , 2013, 13, 258.	3.3	77
61	Microbial individuality in the natural environment. <i>ISME Journal</i> , 2013, 7, 465-467.	9.8	56
62	Stabilization of cooperative virulence by the expression of an avirulent phenotype. <i>Nature</i> , 2013, 494, 353-356.	27.8	289
63	The role of bacteriocins as selfish genetic elements. <i>Biology Letters</i> , 2013, 9, 20121173.	2.3	45
64	Resolution of Conflicting Signals at the Single-Cell Level in the Regulation of Cyanobacterial Photosynthesis and Nitrogen Fixation. <i>PLoS ONE</i> , 2013, 8, e66060.	2.5	25
65	Patterns of Evolutionary Conservation of Essential Genes Correlate with Their Compensability. <i>PLoS Genetics</i> , 2012, 8, e1002803.	3.5	74
66	A Genome-Wide Analysis of Promoter-Mediated Phenotypic Noise in <i>Escherichia coli</i> . <i>PLoS Genetics</i> , 2012, 8, e1002443.	3.5	155
67	The optimal deployment of synergistic antibiotics: a control-theoretic approach. <i>Journal of the Royal Society Interface</i> , 2012, 9, 2488-2502.	3.4	22
68	Gut inflammation can boost horizontal gene transfer between pathogenic and commensal <i>Enterobacteriaceae</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 1269-1274.	7.1	398
69	The activity level of a microbial community function can be predicted from its metatranscriptome. <i>ISME Journal</i> , 2012, 6, 902-904.	9.8	70
70	Division of labour and the evolution of multicellularity. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2012, 279, 1768-1776.	2.6	87
71	Metabolic specialization and the assembly of microbial communities. <i>ISME Journal</i> , 2012, 6, 1985-1991.	9.8	113
72	Selecting Against Antibiotic-Resistant Pathogens: Optimal Treatments in the Presence of Commensal Bacteria. <i>Bulletin of Mathematical Biology</i> , 2012, 74, 908-934.	1.9	17

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73	Evolution of Stress Response in the Face of Unreliable Environmental Signals. <i>PLoS Computational Biology</i> , 2012, 8, e1002627.	3.2	59
74	Framework for Using Quantitative PCR as a Nonculture Based Method To Estimate Virus Infectivity. <i>Environmental Science &amp; Technology</i> , 2011, 45, 2257-2263.	10.0	82
75	Single-cell time-lapse analysis of depletion of the universally conserved essential protein YgjD. <i>BMC Microbiology</i> , 2011, 11, 118.	3.3	19
76	Pole Age Affects Cell Size and the Timing of Cell Division in <i>Methylobacterium extorquens</i> AM1. <i>Journal of Bacteriology</i> , 2011, 193, 5216-5221.	2.2	20
77	The Cost of Virulence: Retarded Growth of <i>Salmonella Typhimurium</i> Cells Expressing Type III Secretion System 1. <i>PLoS Pathogens</i> , 2011, 7, e1002143.	4.7	213
78	Second Messenger-Mediated Adjustment of Bacterial Swimming Velocity. <i>Cell</i> , 2010, 141, 107-116.	28.9	412
79	The constancy of gene conservation across divergent bacterial orders. <i>BMC Research Notes</i> , 2009, 2, 2.	1.4	17
80	Bacterial growth properties at low optical densities. <i>Antonie Van Leeuwenhoek</i> , 2009, 96, 267-274.	1.7	10
81	Second messenger signalling governs <i>Escherichia coli</i> biofilm induction upon ribosomal stress. <i>Molecular Microbiology</i> , 2009, 72, 1500-1516.	2.5	183
82	Self-destructive cooperation mediated by phenotypic noise. <i>Nature</i> , 2008, 454, 987-990.	27.8	384
83	Stabilization of the genome of the mismatch repair deficient <i>Mycobacterium tuberculosis</i> by context-dependent codon choice. <i>BMC Genomics</i> , 2008, 9, 249.	2.8	15
84	A Simple Screen to Identify Promoters Conferring High Levels of Phenotypic Noise. <i>PLoS Genetics</i> , 2008, 4, e1000307.	3.5	74
85	Bacteria as a New Model System for Aging Studies: Investigations Using Light Microscopy. <i>BioTechniques</i> , 2008, 44, 564-567.	1.8	12
86	On the evolutionary origin of aging. <i>Aging Cell</i> , 2007, 6, 235-244.	6.7	139
87	Experimental evolution of aging in a bacterium. <i>BMC Evolutionary Biology</i> , 2007, 7, 126.	3.2	48
88	The Effect of Multifunctionality on the Rate of Evolution in Yeast. <i>Molecular Biology and Evolution</i> , 2006, 23, 721-722.	8.9	52
89	DNA Sequences Shaped by Selection for Stability. <i>PLoS Genetics</i> , 2006, 2, e22.	3.5	40
90	EVOLUTION OF NICHE WIDTH AND ADAPTIVE DIVERSIFICATION. <i>Evolution; International Journal of Organic Evolution</i> , 2004, 58, 2599.	2.3	4

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91	Evolution of cooperation: Two for One?. <i>Current Biology</i> , 2004, 14, R73-R74.	3.9	10
92	Senescence in a Bacterium with Asymmetric Division. <i>Science</i> , 2003, 300, 1920-1920.	12.6	296
93	Effect of Low- and High-Virulence <i>Yersinia enterocolitica</i> Strains on the Inflammatory Response of Human Umbilical Vein Endothelial Cells. <i>Infection and Immunity</i> , 2002, 70, 3510-3520.	2.2	51
94	Effects of assay conditions in life history experiments with <i>Drosophila melanogaster</i> . <i>Journal of Evolutionary Biology</i> , 2001, 14, 199-209.	1.7	62
95	DECLINE IN OFFSPRING VIABILITY AS A MANIFESTATION OF AGING IN <i>DROSOPHILA MELANOGASTER</i> . <i>Evolution; International Journal of Organic Evolution</i> , 2001, 55, 1822-1831.	2.3	86
96	Experimental evolution of aging, growth, and reproduction in fruitflies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 3309-3313.	7.1	176
97	The experimental evolution of aging in fruitflies. <i>Experimental Gerontology</i> , 1998, 33, 785-792.	2.8	17
98	Population dynamics, demographic stochasticity, and the evolution of cooperation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997, 94, 5167-5171.	7.1	18
99	Local Interactions Contribute to Spatial Correlations in Gene Expression Levels in Bacterial Groups. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0