Akos T Kovacs

List of Publications by Citations

112 papers	2,600 citations	30 h-index	46 g-index
135 ext. papers	3,751 ext. citations	6.4 avg, IF	5.8 L-index

#	Paper	IF	Citations
112	Biofilm formation and dispersal in Gram-positive bacteria. *Current Opinion in Biotechnology*, **2011**, 22, 172-9	11.4	191
111	Density of founder cells affects spatial pattern formation and cooperation in Bacillus subtilis biofilms. *ISME Journal*, **2014**, 8, 2069-79	11.9	149
110	Division of Labor during Biofilm Matrix Production. *Current Biology*, **2018**, 28, 1903-1913.e5	6.3	114
109	The Peculiar Functions of the Bacterial Extracellular Matrix. *Trends in Microbiology*, **2017**, 25, 257-266	12.4	103
108	Bacillus subtilis attachment to Aspergillus niger hyphae results in mutually altered metabolism. *Environmental Microbiology*, **2015**, 17, 2099-113	5.2	77
107	CodY, a pleiotropic regulator, influences multicellular behaviour and efficient production of virulence factors in Bacillus cereus. *Environmental Microbiology*, **2012**, 14, 2233-46	5.2	76
106	Motility, Chemotaxis and Aerotaxis Contribute to Competitiveness during Bacterial Pellicle Biofilm Development. *Journal of Molecular Biology*, **2015**, 427, 3695-3708	6.5	73
105	Benchmarking various green fluorescent protein variants in Bacillus subtilis, Streptococcus pneumoniae, and Lactococcus lactis for live cell imaging. *Applied and Environmental Microbiology*, **2013**, 79, 6481-90	4.8	67
104	Cyanobacterial-type, heteropentameric, NAD+-reducing NiFe hydrogenase in the purple sulfur photosynthetic bacterium Thiocapsa roseopersicina. *Applied and Environmental Microbiology*, **2004**, 70, 722-8	4.8	67
103	A Duo of Potassium-Responsive Histidine Kinases Govern the Multicellular Destiny of Bacillus subtilis. *MBio*, **2015**, 6, e00581	7.8	64
102	Quantitative image analysis of microbial communities with BiofilmQ. *Nature Microbiology*, **2021**, 6, 151-156	26.6	49
101	Rok regulates yuaB expression during architecturally complex colony development of Bacillus subtilis 168. *Journal of Bacteriology*, **2011**, 193, 998-1002	3.5	45
100	From environmental signals to regulators: modulation of biofilm development in Gram-positive bacteria. *Journal of Basic Microbiology*, **2014**, 54, 616-32	2.7	43
99	DEAD-Box RNA helicases in Bacillus subtilis have multiple functions and act independently from each other. *Journal of Bacteriology*, **2013**, 195, 534-44	3.5	43
98	Bacillus subtilis biofilm formation and social interactions. *Nature Reviews Microbiology*, **2021**, 19, 600-614	22.2	43
97	Ubiquitous late competence genes in Bacillus species indicate the presence of functional DNA uptake machineries. *Environmental Microbiology*, **2009**, 11, 1911-22	5.2	41
96	Specific Bacillus subtilis 168 variants form biofilms on nutrient-rich medium. *Microbiology (United Kingdom)*, **2016**, 162, 1922-1932	2.9	39

95	Laboratory Evolution of Microbial Interactions in Bacterial Biofilms. *Journal of Bacteriology*, **2016**, 198, 2564-71	3.5	39
94	Molecular Aspects of Plant Growth Promotion and Protection by. *Molecular Plant-Microbe Interactions*, **2021**, 34, 15-25	3.6	39
93	De novo evolved interference competition promotes the spread of biofilm defectors. *Nature Communications*, **2017**, 8, 15127	17.4	37
92	Sliding on the surface: bacterial spreading without an active motor. *Environmental Microbiology*, **2017**, 19, 2537-2545	5.2	37
91	The YmdB phosphodiesterase is a global regulator of late adaptive responses in Bacillus subtilis. *Journal of Bacteriology*, **2014**, 196, 265-75	3.5	37
90	The protective layer of biofilm: a repellent function for a new class of amphiphilic proteins. *Molecular Microbiology*, **2012**, 85, 8-11	4.1	36
89	Induction of natural competence in Bacillus cereus ATCC14579. *Microbial Biotechnology*, **2008**, 1, 226-35	6.3	33
88	Genes involved in the biosynthesis of photosynthetic pigments in the purple sulfur photosynthetic bacterium Thiocapsa roseopersicina. *Applied and Environmental Microbiology*, **2003**, 69, 3093-102	4.8	33
87	Transposon mutagenesis in purple sulfur photosynthetic bacteria: identification of hypF, encoding a protein capable of processing [NiFe] hydrogenases in alpha, beta, and gamma subdivisions of the proteobacteria. *Applied and Environmental Microbiology*, **2001**, 67, 2476-83	4.8	33
86	Evolved Biofilm: Review on the Experimental Evolution Studies of Bacillus subtilis Pellicles. *Journal of Molecular Biology*, **2019**, 431, 4749-4759	6.5	32
85	Modular broad-host-range expression vectors for single-protein and protein complex purification. *Applied and Environmental Microbiology*, **2004**, 70, 712-21	4.8	32
84	Genetic tool development for a new host for biotechnology, the thermotolerant bacterium Bacillus coagulans. *Applied and Environmental Microbiology*, **2010**, 76, 4085-8	4.8	31
83	Metal ions weaken the hydrophobicity and antibiotic resistance of NCIB 3610 biofilms. *Npj Biofilms and Microbiomes*, **2020**, 6, 1	8.2	31
82	Bacillus subtilis. *Trends in Microbiology*, **2019**, 27, 724-725	12.4	29
81	Spatio-temporal remodeling of functional membrane microdomains organizes the signaling networks of a bacterium. *PLoS Genetics*, **2015**, 11, e1005140	6	29
80	Accessory proteins functioning selectively and pleiotropically in the biosynthesis of [NiFe] hydrogenases in Thiocapsa roseopersicina. *FEBS Journal*, **2003**, 270, 2218-27		29
79	Crystal structures of two transcriptional regulators from Bacillus cereus define the conserved structural features of a PadR subfamily. *PLoS ONE*, **2012**, 7, e48015	3.7	28
78	Collapse of genetic division of labour and evolution of autonomy in pellicle biofilms. *Nature Microbiology*, **2018**, 3, 1451-1460	26.6	28

77	The impact of manganese on biofilm development of Bacillus subtilis. *Microbiology (United Kingdom)*, **2016**, 162, 1468-1478	2.9	26
76	Impact of spatial distribution on the development of mutualism in microbes. *Frontiers in Microbiology*, **2014**, 5, 649	5.7	25
75	Hydrogenases, accessory genes and the regulation of [NiFe] hydrogenase biosynthesis in Thiocapsa roseopersicina. *International Journal of Hydrogen Energy*, **2002**, 27, 1463-1469	6.7	25
74	Bacterial differentiation via gradual activation of global regulators. *Current Genetics*, **2016**, 62, 125-8	2.9	24
73	Evolution of exploitative interactions during diversification in Bacillus subtilis biofilms. *FEMS Microbiology Ecology*, **2017**, 93,	4.3	23
72	Presence of Calcium Lowers the Expansion of Bacillus subtilis Colony Biofilms. *Microorganisms*, **2017**, 5,	4.9	23
71	Surfactin production is not essential for pellicle and root-associated biofilm development of. *Biofilm*, **2020**, 2, 100021	5.9	22
70	YsbA and LytST are essential for pyruvate utilization in Bacillus subtilis. *Environmental Microbiology*, **2017**, 19, 83-94	5.2	21
69	The Role of Functional Amyloids in Multicellular Growth and Development of Gram-Positive Bacteria. *Biomolecules*, **2017**, 7,	5.9	21
68	Response of Bacillus cereus ATCC 14579 to challenges with sublethal concentrations of enterocin AS-48. *BMC Microbiology*, **2009**, 9, 227	4.5	18
67	Hydrogen independent expression of hupSL genes in Thiocapsa roseopersicina BBS. *FEBS Journal*, **2005**, 272, 4807-16	5.7	17
66	Bacillus velezensis stimulates resident rhizosphere Pseudomonas stutzeri for plant health through metabolic interactions. *ISME Journal*, **2021**,	11.9	17
65	Depiction of secondary metabolites and antifungal activity of DTU001. *Synthetic and Systems Biotechnology*, **2019**, 4, 142-149	4.2	16
64	The PpsR regulator family. *Research in Microbiology*, **2005**, 156, 619-25	4	16
63	Improvement of biohydrogen production and intensification of biogas formation. *Reviews in Environmental Science and Biotechnology*, **2004**, 3, 321-330	13.9	16
62	A circadian clock in a nonphotosynthetic prokaryote. *Science Advances*, **2021**, 7,	14.3	16
61	The hydrogenases of Thiocapsa roseopersicina. *Biochemical Society Transactions*, **2005**, 33, 61-3	5.1	15
60	Dissimilar pigment regulation in Serpula lacrymans and Paxillus involutus during inter-kingdom interactions. *Microbiology (United Kingdom)*, **2018**, 164, 65-77	2.9	15

59	Genomic and Chemical Diversity of Bacillus subtilis Secondary Metabolites against Plant Pathogenic Fungi. *MSystems*, **2021**, 6,	7.6	15
58	Application of quercetin and its bio-inspired nanoparticles as anti-adhesive agents against Bacillus subtilis attachment to surface. *Materials Science and Engineering C*, **2017**, 70, 753-762	8.3	14
57	BiofilmQ, a software tool for quantitative image analysis of microbial biofilm communities		14
56	An FNR-type regulator controls the anaerobic expression of hyn hydrogenase in Thiocapsa roseopersicina. *Journal of Bacteriology*, **2005**, 187, 2618-27	3.5	13
55	Lysinibacillus fusiformis M5 Induces Increased Complexity in Bacillus subtilis 168 Colony Biofilms via Hypoxanthine. *Journal of Bacteriology*, **2017**, 199,	3.5	12
54	Cheaters shape the evolution of phenotypic heterogeneity in Bacillus subtilis biofilms. *ISME Journal* , **2020**, 14, 2302-2312	11.9	12
53	Unraveling the predator-prey relationship of Cupriavidus necator and Bacillus subtilis. *Microbiological Research*, **2016**, 192, 231-238	5.3	12
52	Monitoring Spatial Segregation in Surface Colonizing Microbial Populations. *Journal of Visualized Experiments*, **2016**,	1.6	12
51	In Bacillus subtilis LutR is part of the global complex regulatory network governing the adaptation to the transition from exponential growth to stationary phase. *Microbiology (United Kingdom)*, **2014** , 160, 243-260	2.9	12
50	Repeated triggering of sporulation in Bacillus subtilis selects against a protein that affects the timing of cell division. *ISME Journal*, **2014**, 8, 77-87	11.9	12
49	From Cell Death to Metabolism: Holin-Antiholin Homologues with New Functions. *MBio*, **2017**, 8,	7.8	11
48	Comparative genomics and transcriptomics analysis of experimentally evolved Escherichia coli MC1000 in complex environments. *Environmental Microbiology*, **2014**, 16, 856-70	5.2	11
47	Anaerobic regulation of hydrogenase transcription in different bacteria. *Biochemical Society Transactions*, **2005**, 33, 36-8	5.1	11
46	Fungal hyphae colonization by relies on biofilm matrix components. *Biofilm*, **2019**, 1, 100007	5.9	11
45	Are There Circadian Clocks in Non-Photosynthetic Bacteria?. *Biology*, **2019**, 8,	4.9	10
44	Single cell FRET analysis for the identification of optimal FRET-pairs in Bacillus subtilis using a prototype MEM-FLIM system. *PLoS ONE*, **2015**, 10, e0123239	3.7	10
43	Hampered motility promotes the evolution of wrinkly phenotype in Bacillus subtilis. *BMC Evolutionary Biology*, **2018**, 18, 155	3	10
42	Diversification of Bacillus subtilis during experimental evolution on Arabidopsis thaliana and the complementarity in root colonization of evolved subpopulations. *Environmental Microbiology*, **2021**, 23, 6122-6136	5.2	10

41	The Ectomycorrhizospheric Habitat of Norway Spruce and : Promotion of Plant Growth and Fitness by a Rich Microorganismic Community. *Frontiers in Microbiology*, **2019**, 10, 307	5.7	9
40	Complete Genome Sequences of 13 Bacillus subtilis Soil Isolates for Studying Secondary Metabolite Diversity. *Microbiology Resource Announcements*, **2020**, 9,	1.3	9
39	Transcriptional responses of Bacillus cereus towards challenges with the polysaccharide chitosan. *PLoS ONE*, **2011**, 6, e24304	3.7	9
38	Effect of Novel Quercetin Titanium Dioxide-Decorated Multi-Walled Carbon Nanotubes Nanocomposite on Bacillus subtilis Biofilm Development. *Materials*, **2018**, 11,	3.5	8
37	Pervasive prophage recombination occurs during evolution of spore-forming Bacilli. *ISME Journal*, **2021**, 15, 1344-1358	11.9	8
36	Surfing of bacterial droplets: sliding revisited. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E8802	11.5	7
35	Privatization of Biofilm Matrix in Structurally Heterogeneous Biofilms. *MSystems*, **2020**, 5,	7.6	7
34	Impact of Rap-Phr system abundance on adaptation of Bacillus subtilis. *Communications Biology*, **2021**, 4, 468	6.7	7
33	Phylogenetic Distribution of Secondary Metabolites in the Bacillus subtilis Species Complex. *MSystems*, **2021**, 6,	7.6	7
32	Phages carry interbacterial weapons encoded by biosynthetic gene clusters. *Current Biology*, **2021**, 31, 3479-3489.e5	6.3	7
31	Functional analysis of the ComK protein of Bacillus coagulans. *PLoS ONE*, **2013**, 8, e53471	3.7	6
30	Modelling population dynamics in a unicellular social organism community using a minimal model and evolutionary game theory. *Open Biology*, **2020**, 10, 200206	7	6
29	Impaired competence in flagellar mutants of Bacillus subtilis is connected to the regulatory network governed by DegU. *Environmental Microbiology Reports*, **2018**, 10, 23-32	3.7	6
28	Differential equation-based minimal model describing metabolic oscillations in biofilms. *Royal Society Open Science*, **2020**, 7, 190810	3.3	5
27	Distinct roles of ComK1 and ComK2 in gene regulation in Bacillus cereus. *PLoS ONE*, **2011**, 6, e21859	3.7	5
26	Secondary metabolites of impact the assembly of soil-derived semisynthetic bacterial communities. *Beilstein Journal of Organic Chemistry*, **2020**, 16, 2983-2998	2.5	5
25	Deletion of Rap-Phr systems in Bacillus subtilis influences in vitro biofilm formation and plant root colonization. *MicrobiologyOpen*, **2021**, 10, e1212	3.4	5
24	Adaptation of Bacillus thuringiensis to Plant Colonization Affects Differentiation and Toxicity. *MSystems*, **2021**, 6, e0086421	7.6	4

23	Impact of Rap-Phr system abundance on adaptation of Bacillus subtilis		4
22	Draft Genome Sequence of the Soil Isolate Lysinibacillus fusiformis M5, a Potential Hypoxanthine Producer. *Genome Announcements*, **2016**, 4,		4
21	Pervasive prophage recombination occurs during evolution of spore-formingBacilli		3
20	Adaptation of Bacillus thuringiensis to plant colonization affects differentiation and toxicity		3
19	The global regulator CodY is required for the fitness of Bacillus cereus in various laboratory media and certain beverages. *FEMS Microbiology Letters*, **2016**, 363,	2.9	3
18	Genomic and chemical diversity of Bacillus subtilis secondary metabolites against plant pathogenic fungi		2
17	Phages weaponize their bacteria with biosynthetic gene clusters		2
16	Experimental evolution of Bacillus subtilis on Arabidopsis thaliana roots reveals fast adaptation and improved root colonization in the presence of soil microbes		2
15	Diversification of B. subtilis during experimental evolution on A. thaliana and the complementarity in root colonization of evolved subpopulations		2
14	Experimental evolution of Bacillus subtilis on Arabidopsis thaliana roots reveals fast adaptation and improved root colonization. *IScience*, **2022**, 104406	6.1	2
13	Structural damage of Bacillus subtilis biofilms using pulsed laser interaction with gold thin films. *Journal of Biophotonics*, **2017**, 10, 1043-1052	3.1	1
12	Complete Genome Sequences of Four Soil-Derived Isolates for Studying Synthetic Bacterial Community Assembly. *Microbiology Resource Announcements*, **2021**, 10, e0084821	1.3	1
11	Fungal hyphae colonization byBacillus subtilisrelies on biofilm matrix components		1
10	Privatization of biofilm matrix in structurally heterogeneous biofilms		1
9	Phylogenetic distribution of secondary metabolites in the Bacillus subtilis species complex		1
8	A fungal scent from the cheese. *Environmental Microbiology*, **2020**, 22, 4524-4526	5.2	1
7	Adaptation and phenotypic diversification of Bacillus thuringiensis 407 biofilm are accompanied by a fuzzy spreader morphotype		1
6	sensu lato biofilm formation and its ecological importance.. *Biofilm*, **2022**, 4, 100070	5.9	1

5	Biofilm Dispersal for Spore Release in Bacillus subtilis. *Journal of Bacteriology*, **2021**, 203, e0019221	3.5	0
4	Quantitative High-Throughput Screening Methods Designed for Identification of Bacterial Biocontrol Strains with Antifungal Properties.. *Microbiology Spectrum*, **2022**, e0143321	8.9	0
3	Adaptation and phenotypic diversification of Bacillus thuringiensis biofilm are accompanied by fuzzy spreader morphotypes.. *Npj Biofilms and Microbiomes*, **2022**, 8, 27	8.2	0
2	Physiological and transcriptional profiling of surfactin exerted antifungal effect against Candida albicans. *Biomedicine and Pharmacotherapy*, **2022**, 152, 113220	7.5	0
1	Einblicke in das Sozialleben von Mikroben. *BioSpektrum*, **2015**, 21, 264-266	0.1	