# Akos T Kovacs

List of Publications by Year
in descending order



| 101 | 4,619 | 109321<br>35 | 138484<br>58 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 135 | 135 | 135 | 4271 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Biofilm formation and dispersal in Gram-positive bacteria. Current Opinion in Biotechnology, 2011, 22, 172-179. | 6.6 | 240 |
| 2 | Density of founder cells affects spatial pattern formation and cooperation in <i>Bacillus subtilis</i> biofilms. ISME Journal, 2014, 8, 2069-2079. | 9.8 | 231 |
| 3 | Bacillus subtilis biofilm formation and social interactions. Nature Reviews Microbiology, 2021, 19, 600-614. | 28.6 | 213 |
| 4 | Division of Labor during Biofilm Matrix Production. Current Biology, 2018, 28, 1903-1913.e5. | 3.9 | 203 |
| 5 | Quantitative image analysis of microbial communities with BiofilmQ. Nature Microbiology, 2021, 6, 151-156. | 13.3 | 181 |
| 6 | The Peculiar Functions of the Bacterial Extracellular Matrix. Trends in Microbiology, 2017, 25, 257-266. | 7.7 | 180 |
| 7 | Molecular Aspects of Plant Growth Promotion and Protection by<i>Bacillus subtilis</i>. Molecular Plant-Microbe Interactions, 2021, 34, 15-25. | 2.6 | 134 |
| 8 | Motility, Chemotaxis and Aerotaxis Contribute to Competitiveness during Bacterial Pellicle Biofilm Development. Journal of Molecular Biology, 2015, 427, 3695-3708. | 4.2 | 127 |
| 9 | <i>Bacillus velezensis</i> stimulates resident rhizosphere <i>Pseudomonas stutzeri</i> for plant health through metabolic interactions. ISME Journal, 2022, 16, 774-787. | 9.8 | 125 |
| 10 | <scp><i>B</i></scp><i>acillus subtilis</i> attachment to <scp><i>A</i></scp><i>spergillus niger</i> hyphae results in mutually altered metabolism. Environmental Microbiology, 2015, 17, 2099-2113. | 3.8 | 112 |
| 11 | Benchmarking Various Green Fluorescent Protein Variants in Bacillus subtilis, Streptococcus pneumoniae, and Lactococcus lactis for Live Cell Imaging. Applied and Environmental Microbiology, 2013, 79, 6481-6490. | 3.1 | 110 |
| 12 | A Duo of Potassium-Responsive Histidine Kinases Govern the Multicellular Destiny of Bacillus subtilis. MBio, 2015, 6, e00581. | 4.1 | 89 |
| 13 | CodY, a pleiotropic regulator, influences multicellular behaviour and efficient production of virulence factors in <i>Bacillus cereus</i>. Environmental Microbiology, 2012, 14, 2233-2246. | 3.8 | 87 |
| 14 | Bacillus subtilis. Trends in Microbiology, 2019, 27, 724-725. | 7.7 | 84 |
| 15 | Metal ions weaken the hydrophobicity and antibiotic resistance of Bacillus subtilis NCIB 3610 biofilms. Npj Biofilms and Microbiomes, 2020, 6, 1. | 6.4 | 82 |
| 16 | Sliding on the surface: bacterial spreading without an active motor. Environmental Microbiology, 2017, 19, 2537-2545. | 3.8 | 71 |
| 17 | DEAD-Box RNA Helicases in Bacillus subtilis Have Multiple Functions and Act Independently from Each Other. Journal of Bacteriology, 2013, 195, 534-544. | 2.2 | 69 |
| 18 | The YmdB Phosphodiesterase Is a Global Regulator of Late Adaptive Responses in Bacillus subtilis. Journal of Bacteriology, 2014, 196, 265-275. | 2.2 | 69 |

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|---|---|---|---|
| 19 | Laboratory Evolution of Microbial Interactions in Bacterial Biofilms. Journal of Bacteriology, 2016, 198, 2564-2571. | 2.2 | 69 |
| 20 | Cyanobacterial-Type, Heteropentameric, NAD <sup>+</sup> -Reducing NiFe Hydrogenase in the Purple Sulfur Photosynthetic Bacterium <i>Thiocapsa roseopersicina</i>. Applied and Environmental Microbiology, 2004, 70, 722-728. | 3.1 | 68 |
| 21 | Specific Bacillus subtilis 168 variants form biofilms on nutrient-rich medium. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Overlo | 1.8 | 63 |
| 22 | Ubiquitous late competence genes in <i>Bacillus</i> species indicate the presence of functional DNA uptake machineries. Environmental Microbiology, 2009, 11, 1911-1922. | 3.8 | 60 |
| 23 | De novo evolved interference competition promotes the spread of biofilm defectors. Nature Communications, 2017, 8, 15127. | 12.8 | 60 |
| 24 | A circadian clock in a nonphotosynthetic prokaryote. Science Advances, 2021, 7, . | 10.3 | 59 |
| 25 | Evolved Biofilm: Review on the Experimental Evolution Studies of Bacillus subtilis Pellicles. Journal of Molecular Biology, 2019, 431, 4749-4759. | 4.2 | 57 |
| 26 | Genomic and Chemical Diversity of Bacillus subtilis Secondary Metabolites against Plant Pathogenic Fungi. MSystems, 2021, 6, . | 3.8 | 55 |
| 27 | From environmental signals to regulators: Modulation of biofilm development in Gramâ€positive bacteria. Journal of Basic Microbiology, 2014, 54, 616-632. | 3.3 | 53 |
| 28 | Collapse of genetic division of labour and evolution of autonomy in pellicle biofilms. Nature Microbiology, 2018, 3, 1451-1460. | 13.3 | 51 |
| 29 | Rok Regulates <i>yuaB</i> Expression during Architecturally Complex Colony Development of <i>Bacillus subtilis</i> 168. Journal of Bacteriology, 2011, 193, 998-1002. | 2.2 | 48 |
| 30 | Depiction of secondary metabolites and antifungal activity of Bacillus velezensis DTU001. Synthetic and Systems Biotechnology, 2019, 4, 142-149. | 3.7 | 46 |
| 31 | Crystal Structures of Two Transcriptional Regulators from Bacillus cereus Define the Conserved Structural Features of a PadR Subfamily. PLoS ONE, 2012, 7, e48015. | 2.5 | 42 |
| 32 | Transposon Mutagenesis in Purple Sulfur Photosynthetic Bacteria: Identification of hypF , Encoding a Protein Capable of Processing [NiFe] Hydrogenases in Î±, Î², and Î³ Subdivisions of the Proteobacteria. Applied and Environmental Microbiology, 2001, 67, 2476-2483. | 3.1 | 41 |
| 33 | The impact of manganese on biofilm development of Bacillus subtilis. Microbiology (United Kingdom), 2016, 162, 1468-1478. | 1.8 | 41 |
| 34 | Bacterial differentiation via gradual activation of global regulators. Current Genetics, 2016, 62, 125-128. | 1.7 | 40 |
| 35 | Genes Involved in the Biosynthesis of Photosynthetic Pigments in the Purple Sulfur Photosynthetic Bacterium Thiocapsa roseopersicina. Applied and Environmental Microbiology, 2003, 69, 3093-3102. | 3.1 | 39 |
| 36 | Induction of natural competence in <i>Bacillus cereus</i> ATCC14579. Microbial Biotechnology, 2008, 1, 226-235. | 4.2 | 39 |

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|---|---|---|---|
| 37 | The protective layer of biofilm: a repellent function for a new class of amphiphilic proteins. Molecular Microbiology, 2012, 85, 8-11. | 2.5 | 39 |
| 38 | Spatio-temporal Remodeling of Functional Membrane Microdomains Organizes the Signaling Networks of a Bacterium. PLoS Genetics, 2015, 11, e1005140. | 3.5 | 39 |
| 39 | Phylogenetic Distribution of Secondary Metabolites in the Bacillus subtilis Species Complex. MSystems, 2021, 6, . | 3.8 | 39 |
| 40 | Accessory proteins functioning selectively and pleiotropically in the biosynthesis of [NiFe] hydrogenases inThiocapsa roseopersicina. FEBS Journal, 2003, 270, 2218-2227. | 0.2 | 37 |
| 41 | Genetic Tool Development for a New Host for Biotechnology, the Thermotolerant Bacterium <i>Bacillus coagulans</i>. Applied and Environmental Microbiology, 2010, 76, 4085-4088. | 3.1 | 37 |
| 42 | Modular Broad-Host-Range Expression Vectors for Single-Protein and Protein Complex Purification. Applied and Environmental Microbiology, 2004, 70, 712-721. | 3.1 | 34 |
| 43 | Presence of Calcium Lowers the Expansion of Bacillus subtilis Colony Biofilms. Microorganisms, 2017, 5, 7. | 3.6 | 33 |
| 44 | Evolution of exploitative interactions during diversification in Bacillus subtilis biofilms. FEMS Microbiology Ecology, 2018, 94, . | 2.7 | 33 |
| 45 | Surfactin production is not essential for pellicle and root-associated biofilm development of Bacillus subtilis. Biofilm, 2020, 2, 100021. | 3.8 | 33 |
| 46 | Impact of spatial distribution on the development of mutualism in microbes. Frontiers in Microbiology, 2014, 5, 649. | 3.5 | 32 |
| 47 | YsbA and LytST are essential for pyruvate utilization in <i>Bacillus subtilis</i>. Environmental Microbiology, 2017, 19, 83-94. | 3.8 | 32 |
| 48 | Phages carry interbacterial weapons encoded by biosynthetic gene clusters. Current Biology, 2021, 31, 3479-3489.e5. | 3.9 | 30 |
| 49 | Hydrogenases, accessory genes and the regulation of 6NiFe9 hydrogenase biosynthesis in Thiocapsa roseopersicina. International Journal of Hydrogen Energy, 2002, 27, 1463-1469. | 7.1 | 27 |
| 50 | The Role of Functional Amyloids in Multicellular Growth and Development of Gram-Positive Bacteria. Biomolecules, 2017, 7, 60. | 4.0 | 27 |
| 51 | Privatization of Biofilm Matrix in Structurally Heterogeneous Biofilms. MSystems, 2020, 5, . | 3.8 | 27 |
| 52 | Are There Circadian Clocks in Non-Photosynthetic Bacteria?. Biology, 2019, 8, 41. | 2.8 | 26 |
| 53 | Fungal hyphae colonization by Bacillus subtilis relies on biofilm matrix components. Biofilm, 2019, 1, 100007. | 3.8 | 26 |
| 54 | Pervasive prophage recombination occurs during evolution of spore-forming <i>Bacilli</i>. ISME Journal, 2021, 15, 1344-1358. | 9.8 | 26 |

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| 55 | Diversification of <scp><i>Bacillus subtilis</i></scp> during experimental evolution on <i><scp>A</scp>rabidopsis <scp>thaliana</scp></i> and the complementarity in root colonization of evolved subpopulations. Environmental Microbiology, 2021, 23, 6122-6136. | 3.8 | 26 |
| 56 | The PpsR regulator family. Research in Microbiology, 2005, 156, 619-625. | 2.1 | 24 |
| 57 | Cheaters shape the evolution of phenotypic heterogeneity in <i>Bacillus subtilis</i> biofilms. ISME Journal, 2020, 14, 2302-2312. | 9.8 | 23 |
| 58 | Dissimilar pigment regulation in Serpula lacrymans and Paxillus involutus during inter-kingdom interactions. Microbiology (United Kingdom), 2018, 164, 65-77. | 1.8 | 23 |
| 59 | Unraveling the predator-prey relationship of Cupriavidus necator and Bacillus subtilis. Microbiological Research, 2016, 192, 231-238. | 5.3 | 22 |
| 60 | From Cell Death to Metabolism: Holin-Antiholin Homologues with New Functions. MBio, 2017, 8, . | 4.1 | 22 |
| 61 | Response of Bacillus cereus ATCC 14579 to challenges with sublethal concentrations of enterocin AS-48. BMC Microbiology, 2009, 9, 227. | 3.3 | 21 |
| 62 | Bacillus cereus sensu lato biofilm formation and its ecological importance. Biofilm, 2022, 4, 100070. | 3.8 | 21 |
| 63 | Experimental evolution of Bacillus subtilis on Arabidopsis thaliana roots reveals fast adaptation and improved root colonization. IScience, 2022, 25, 104406. | 4.1 | 20 |
| 64 | 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. | 7.3 | 19 |
| 65 | The Ectomycorrhizospheric Habitat of Norway Spruce and Tricholoma vaccinum: Promotion of Plant Growth and Fitness by a Rich Microorganismic Community. Frontiers in Microbiology, 2019, 10, 307. | 3.5 | 19 |
| 66 | Improvement of biohydrogen production and intensification of biogas formation. Reviews in Environmental Science and Biotechnology, 2004, 3, 321-330. | 8.1 | 18 |
| 67 | The hydrogenases of Thiocapsa roseopersicina. Biochemical Society Transactions, 2005, 33, 61-63. | 3.4 | 18 |
| 68 | Hydrogen independent expression of hupSL genes in Thiocapsa roseopersicina BBS. FEBS Journal, 2005, 272, 4807-4816. | 4.7 | 18 |
| 69 | Impact of Rap-Phr system abundance on adaptation of Bacillus subtilis. Communications Biology, 2021, 4, 468. | 4.4 | 18 |
| 70 | Secondary metabolites of <i>Bacillus subtilis</i> impact the assembly of soil-derived semisynthetic bacterial communities. Beilstein Journal of Organic Chemistry, 2020, 16, 2983-2998. | 2.2 | 18 |
| 71 | Lysinibacillus fusiformis M5 Induces Increased Complexity in Bacillus subtilis 168 Colony Biofilms via Hypoxanthine. Journal of Bacteriology, 2017, 199, . | 2.2 | 17 |
| 72 | Repeated triggering of sporulation in <i>Bacillus subtilis</i> selects against a protein that affects the timing of cell division. ISME Journal, 2014, 8, 77-87. | 9.8 | 16 |

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|---|---|---|---|
| 73 | Monitoring Spatial Segregation in Surface Colonizing Microbial Populations. Journal of Visualized Experiments, 2016, , . | 0.3 | 16 |
| 74 | Hampered motility promotes the evolution of wrinkly phenotype in Bacillus subtilis. BMC Evolutionary Biology, 2018, 18, 155. | 3.2 | 16 |
| 75 | Adaptation of Bacillus thuringiensis to Plant Colonization Affects Differentiation and Toxicity. MSystems, 2021, 6, e0086421. | 3.8 | 16 |
| 76 | Complex extracellular biology drives surface competition during colony expansion in <i>Bacillus subtilis</i>. ISME Journal, 2022, 16, 2320-2328. | 9.8 | 16 |
| 77 | 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. | 1.8 | 15 |
| 78 | An FNR-Type Regulator Controls the Anaerobic Expression of Hyn Hydrogenase in Thiocapsa roseopersicina. Journal of Bacteriology, 2005, 187, 2618-2627. | 2.2 | 13 |
| 79 | Complete Genome Sequences of 13 Bacillus subtilis Soil Isolates for Studying Secondary Metabolite Diversity. Microbiology Resource Announcements, 2020, 9, . | 0.6 | 13 |
| 80 | Deletion of Rapâ€Phr systems in <i>Bacillus subtilis</i> influences in vitro biofilm formation and plant root colonization. MicrobiologyOpen, 2021, 10, e1212. | 3.0 | 13 |
| 81 | Comparative genomics and transcriptomics analysis of experimentally evolved <i><scp>E</scp>scherichia coli</i>â€…<scp>MC</scp>1000 in complex environments. Environmental Microbiology, 2014, 16, 856-870. | 3.8 | 12 |
| 82 | 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. | 2.5 | 12 |
| 83 | Surfing of bacterial droplets: <i>Bacillus subtilis</i> sliding revisited. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8802. | 7.1 | 12 |
| 84 | Anaerobic regulation of hydrogenase transcription in different bacteria. Biochemical Society Transactions, 2005, 33, 36-38. | 3.4 | 11 |
| 85 | Effect of Novel Quercetin Titanium Dioxide-Decorated Multi-Walled Carbon Nanotubes Nanocomposite on Bacillus subtilis Biofilm Development. Materials, 2018, 11, 157. | 2.9 | 11 |
| 86 | Modelling population dynamics in a unicellular social organism community using a minimal model and evolutionary game theory. Open Biology, 2020, 10, 200206. | 3.6 | 11 |
| 87 | Impaired competence in flagellar mutants of <i>Bacillus subtilis</i> is connected to the regulatory network governed by DegU. Environmental Microbiology Reports, 2018, 10, 23-32. | 2.4 | 10 |
| 88 | Transcriptional Responses of Bacillus cereus towards Challenges with the Polysaccharide Chitosan. PLoS ONE, 2011, 6, e24304. | 2.5 | 10 |
| 89 | Differential equation-based minimal model describing metabolic oscillations in <i>Bacillus subtilis</i> biofilms. Royal Society Open Science, 2020, 7, 190810. | 2.4 | 8 |
| 90 | Functional Analysis of the ComK Protein of Bacillus coagulans. PLoS ONE, 2013, 8, e53471. | 2.5 | 8 |

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| 91 | Distinct Roles of ComK1 and ComK2 in Gene Regulation in Bacillus cereus. PLoS ONE, 2011, 6, e21859. | 2.5 | 6 |
| 92 | Draft Genome Sequence of the Soil Isolate Lysinibacillus fusiformis M5, a Potential Hypoxanthine Producer. Genome Announcements, 2016, 4, . | 0.8 | 6 |
| 93 | Complete Genome Sequences of Four Soil-Derived Isolates for Studying Synthetic Bacterial Community Assembly. Microbiology Resource Announcements, 2021, 10, e0084821. | 0.6 | 6 |
| 94 | Quantitative High-Throughput Screening Methods Designed for Identification of Bacterial Biocontrol Strains with Antifungal Properties. Microbiology Spectrum, 2022, 10, e0143321. | 3.0 | 6 |
| 95 | Physiological and transcriptional profiling of surfactin exerted antifungal effect against Candida albicans. Biomedicine and Pharmacotherapy, 2022, 152, 113220. | 5.6 | 6 |
| 96 | The global regulator CodY is required for the fitness of<i>Bacillus cereus</i>in various laboratory media and certain beverages. FEMS Microbiology Letters, 2016, 363, fnw126. | 1.8 | 4 |
| 97 | Adaptation and phenotypic diversification of Bacillus thuringiensis biofilm are accompanied by fuzzy spreader morphotypes. Npj Biofilms and Microbiomes, 2022, 8, 27. | 6.4 | 4 |
| 98 | Biofilm Dispersal for Spore Release in Bacillus subtilis. Journal of Bacteriology, 2021, 203, e0019221. | 2.2 | 3 |
| 99 | A fungal scent from the cheese. Environmental Microbiology, 2020, 22, 4524-4526. | 3.8 | 2 |
| 100 | Structural damage of Bacillus subtilis biofilms using pulsed laser interaction with gold thin films. Journal of Biophotonics, 2017, 10, 1043-1052. | 2.3 | 1 |
| 101 | Biofilm: Introducing a new journal for the broad biofilm field. Biofilm, 2019, 1, 100003. | 3.8 | 0 |