

Complete Publication List (11/2024)

(published or accepted articles, manuscripts on preprint servers, book chapters, other articles)

Key for co-authoring Group Members

Group leader, Postdocs/Researchers/Senior Scientist, PhD Students/co-supervised PhD Students, Undergraduates, Technicians *equal contribution

Articles

2024

104. **Nieto, E. E., Jurburg, S. D., Steinbach, N.,** Festa, S., Morelli, I. S., Coppotelli, B. M., **Chatzinotas, A.** (2024). DNA stable isotope probing reveals the impact of trophic interactions on bioaugmentation of soils with different pollution histories. *Microbiome*, 12(1), 146.
103. Cohen, Y., **Johnke, J.,** Abed-Rabbo, A., Pasternak, Z., **Chatzinotas, A.** & Jurkevitch, E. (2024) Unbalanced predatory communities and a lack of microbial degraders characterize the microbiota of a highly sewage-polluted Eastern-Mediterranean stream. *FEMS Microbial Ecology*, 100 (6) *fi*ae069
102. The Datathon 2022 Consortium: **Jurburg S.D, Blanco M. J. A, Chatzinotas A.,** Kazem A., ... (2024) Datathons: fostering equitability in data reuse in ecology. *Trends in Microbiology* 32 (5), 415-418

2023

101. Höppner, J., Krohn, S., van den Munckhof, E. H., **Kallies, R.,** Herber, A., Zeller, K., ... **Chatzinotas, A.,**... & Engelmann, C. (2023). Changes of the bacterial composition in duodenal fluid from patients with liver cirrhosis and molecular bacterascites. *Scientific Reports*, 13(1), 23001.
100. Breulmann, M., **Kallies, R.,** Bernhard, K., Gasch, A., Müller, R. A., Harms, H., **Chatzinotas A.,** & van Afferden, M. (2023). A long-term passive sampling approach for wastewater-based monitoring of SARS-CoV-2 in Leipzig, Germany. *Science of the Total Environment*, 887, 164143.
99. Bates, K. A., Friesen, J., Loyau, A., Butler, H., Vredenburg, V. T., **Laufer, J., Chatzinotas A.,** & Schmeller, D. S. (2023). Environmental and anthropogenic factors shape the skin bacterial communities of a semi-arid amphibian species. *Microbial Ecology*, 86(2), 1393-1404.
98. **Jurburg, S. D.,** Hom, E. F., & **Chatzinotas, A.** (2023). Beyond pathogenesis: Detecting the full spectrum of ecological interactions in the virosphere. *Plos Biology*, 21(5), e3002109.

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97. **Jurburg, S. D.,** Buscot, F., **Chatzinotas, A.,** Chaudhari, N. M., Clark, A. T., Garbowski, M., ... & Heintz-Buschart, A. (2022). The community ecology perspective of omics data. *Microbiome*, 10(1), 225.
96. **Jurburg, S. D.,** Eisenhauer, N., Buscot, F., **Chatzinotas, A.,** Chaudhari, N. M., Heintz-Buschart, A., **Kallies, R.,** ... & Singh, B. K. (2022). Potential of microbiome-based solutions for agrifood systems. *Nature Food*, 3(8), 557-560.
95. Vasileiadis S., Perruchon C., Scheer B., Adrian L., **Steinbach N.,** Trevisan M., Plaza-Bolaños P., Agüera A., **Chatzinotas A.,** Karpouzias G. D. Nutritional inter-dependencies and a carbazole-dioxygenase are key elements of a bacterial consortium relying on a *Sphingomonas* for the degradation of the fungicide thiabendazole. *Environmental Microbiology* 24 (11) 5105-5122

94. **You X.**, **Kallies R.**, Kühn I., Schmidt M., Harms H., **Chatzinotas A.**, Wick L.Y. (2022) Phage co-transport with hyphal-riding bacteria fuels bacterial invasion in a water-unsaturated microbial model system. *The ISME Journal* 16 (5), 1275-1283
93. **You X.**, **Kallies R.**, Hild, K., Hildebrandt, A., Harms, H., **Chatzinotas, A.**, Wick, L. Y. (2022). Transport of marine tracer phage particles in soil. *Science of The Total Environment*, 814, 152704.
92. **You X.**, Klose N., **Kallies R.**, Harms H., **Chatzinotas A.**, Wick L. Y. (2022). Mycelia-assisted isolation of non-host bacteria able to co-transport phages. *Viruses*, 14(2), 195.

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91. Guerra, C. A., Bardgett, R. D., Caon, L., Crowther, T. W., Delgado-Baquerizo, M., (...), **Chatzinotas A.** (...), Eisenhauer, N. (2021). Tracking, targeting, and conserving soil biodiversity. *Science*, 371(6526), 239-241.
90. Cohen Y., Pasternak Z., Müller S., Hübschmann T., Schattenberg F., Sivakala K. K., Abed-Rabbo A., **Chatzinotas A.**, Jurkevitch E. Community and single cell analyses reveal complex predatory interactions between bacteria in high-diversity systems. *Nature Communications* 12, 5481
89. Voigt E., Rall B. C., **Chatzinotas A.**, Brose U., Rosenbaum B. (2021). Phage strategies facilitate bacterial coexistence under environmental variability. *PeerJ*, 9, e12194.
88. Liess M., Liebmann L., Vormeier P., Weisner O., Altenburger R., Borchardt D., Brack W., **Chatzinotas A.**, (...), Reemtsma, T. (2021). Pesticides are the dominant stressors for vulnerable insects in lowland streams. *Water Research*, 201, 117262.
87. Weitere M., Altenburger R., Anlanger C., Baborowski M., Bärlund I., Beckers L.-M., Borchardt D., Brack W., Brase L., Busch W., **Chatzinotas A.**, (...), **Kallies R.**, (...), Brauns A. (2021) Disentangling multiple chemical and non-chemical stressors in lotic ecosystems using a longitudinal approach. *Science of the Total Environment* 769: 144324.
86. **Hofmann P.**, Clark A., Hoffmann P., **Chatzinotas A.**, Harpole S., Susanne D. (2021) Beyond nitrogen: phosphorus - Estimating the minimum niche dimensionality for resource competition between phytoplankton, *Ecology Letters*, 24(4), 761-771.
85. Saraiva J. P., Worrich A., **Karakoç C.**, **Kallies R.**, **Chatzinotas A.**, Centler F., Nunes da Rocha U. (2021). Mining synergistic microbial interactions: a roadmap on how to integrate multi-omics data. *Microorganisms*, 9(4), 840.
84. Saraiva J. P., Bartholomäus A., **Kallies R.**, Gomes M., Bicalho M., Kasmanas J. C., Vogt C., **Chatzinotas A.**, Stadler P., Dias O., Nunes da Rocha U. (2021). OrtSuite: from genomes to prediction of microbial interactions within targeted ecosystem processes. *Life science alliance*, 4(12).

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83. Guerra C.A., Heintz-Buschart A., Sikorski J., **Chatzinotas A.**, Guerrero-Ramírez N., Cesarz S., Beaumelle L., Rillig M.C., Maestre F.T., Delgado-Baquerizo M., Buscot F., Overmann J., Patoine G., Phillips H.R.P., Winter M., Wubet T., Küsel K., Bardgett R.D., Cameron E.K., Cowan D., Grebenc T., Marín C., Orgiazzi A., Singh B.K., Wall D.H., Eisenhauer N. (2020). Blind spots in global soil biodiversity and ecosystem function research. *Nature Communications* 11(1): 1-13
82. **Karakoç C.**, Clark A., **Chatzinotas A.** (2020). Diversity and coexistence are influenced by time-dependent species interactions in a predator-prey system. *Ecology Letters* 23(6): 983-993
81. **Cravo A.**, Schmeller D. S., **Chatzinotas A.**, Vredenburg V. T., Loyeau A. (2020). Environmental factors and host microbiomes shape host-pathogen dynamics. *Trends in Parasitology* 36 (7): 616-633

80. Risse-Buhl U., Anlanger C., **Chatzinotas A.**, Noss C., Lorke A., Weitere M. (2020). Near streambed flow shapes microbial guilds within and across trophic levels in fluvial biofilms. *Limnology and Oceanography* 65(10): 2261-2277

79. Banitz T., **Chatzinotas A.**, Worrich A. (2020). Prospects for integrating disturbances, biodiversity and ecosystem functioning using microbial systems, *Frontiers in Ecology and Evolution* 8: 21

78. Weise H., Weise H., Auge H., Baessler C., Bärlund I., Bennett E.M., Berger U., Bohn F., Bonn A., Borchardt D., Brand F., **Chatzinotas A.**, Corstanje R., De Laender F., Dietrich P., Dunker S., Durka W., Fazey I., Groeneveld J., Guilbaud C.S.E., Harms H., Harpole S., Harris J., Jax K., Jeltsch F., Johst K., Joshi J., Klotz S., Kühn I., Kuhlicke C., Müller B., Radchuk V., Reuter H., Rinke K., Schmitt-Jansen M., Seppelt R., Singer A., Standish R.J., Thulke H.H., Tietjen B., Weitere M., Wirth C., Wolf C., Grimm V. (2020). Resilience trinity: safeguarding ecosystem functioning and services across different time horizons and decision contexts, *Oikos* 129: 445-456

2019

77. **Hofmann P.**, **Chatzinotas A.**, Harpole S., Susanne D. (2019). Phytoplankton trait topographies shift along temperature and stoichiometry gradients in a species-specific way. *Ecology* 100: e02875

76. **Ghanem N.**, Stanley C. E., Harms H., **Chatzinotas A.**, Wick L. Y. (2019). Mycelial effects on phage retention during transport in a microfluidic platform. *Environmental Science & Technology* 53: 11755-11763.

75. Sendek A. *, **Karakoç C.***, Wagg C., Domínguez-Begines J., Martucci de Couto G, van der Heijden M.G.A., Naz A.A., Lochner A., **Chatzinotas A.**, Klotz S., Gómez-Aparicio L., Eisenhauer N. (2019). Drought modulates interactions between arbuscular mycorrhizal fungal diversity and barley genotype diversity, *Scientific Reports* 9: 9650

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72. **Kallies R.**, **Kiesel B.**, Schmidt M., **Ghanem N.**, Zopfi J., Hackermüller J., Harms H., Wick L.Y., **Chatzinotas A.** (2019). Complete genome sequence of Pseudoalteromonas phage vB_PS-H6/1 that infects *Pseudoalteromonas* sp. strain H6. *Marine Genomics*, doi.org/10.1016/j.margen.2019.03.002

71. Cohen Y., Pasternak Z., **Johnke J.**, Abed-Rabbo A., Kushmaro A., **Chatzinotas A.**, Jurkevitch E. (2019). Bacteria and micro-eukaryotes are differentially segregated in sympatric wastewater microhabitats. *Environmental Microbiology* 21: 1757-1770

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69. Krohn S., Zeller K., Böhm S., **Chatzinotas A.**, Harms H., Hartmann J., **Heidtmann A.**, Herber A., Kaiser T., Treuheit M., Hoffmeister A., Berg T. & Hoffmeister A. (2018). Molecular quantification and differentiation of *Candida* species in biological specimens of patients with liver cirrhosis. *PloS one*, 13(6), e0197319.

68. **Kuppardt A.**, Fester T., Härtig C., **Chatzinotas A.** (2018). Rhizosphere protists change metabolite profiles in *Zea mays*. *Frontiers in Microbiology* 9:857

67. Ye F., Ma M.-H., den Camp H. J. O., **Chatzinotas A.**, Li L., Lv M.-Q., Wu S.-J., Wang, Y. (2018). Different Recovery Processes of Soil Ammonia Oxidizers from Flooding Disturbance. *Microbial Ecology* 76: 1041-1052
66. **Ghanem N.**, Trost M., Sanchez Fontanet L., Harms H., **Chatzinotas A.**, Wick L. (2018). Changes of the Specific Infectivity of Tracer Phages during Transport in Porous Media, *Environmental Science & Technology* 52:3486-3492
65. **Karakoç C.**, Radchuk V., Harms H., **Chatzinotas A.** (2018). Interactions between predation and disturbances shape prey communities. *Scientific Reports* 8:2968
64. Schmeller D.S., Loyau A., Bao K., Brack W., **Chatzinotas A.**, De Vleeschouwer F., Friesen J., Gandois L., Hansson S.V., Haver M., Le Roux G., Shen J., Teisserenc R., Vredenburg V.T. (2018). People, pollution and pathogens - global change impacts in mountain freshwater ecosystems. *Science of the Total Environment* 622: 756-763

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63. **Narr A.**, Nawaz A., Wick L. Y., Harms, H., **Chatzinotas A.** (2017). Soil viral communities vary temporally and along a land use transect as revealed by virus-like particle counting and a modified community fingerprinting approach (fRAPD) *Frontiers in Microbiology* 8: 1975
62. **Johnke J.**, Baron M., Leeuw M., Kushmaro A., Jurkevitch E., Harms H., **Chatzinotas A.** (2017). A generalist protist predator enables coexistence in multitrophic predator-prey systems containing a phage and the bacterial predator Bdellovibrio. *Frontiers in Ecology and Evolution* 5:124
61. **Kallies R., Kiesel B.**, Zopfi J., Wick L.Y., **Chatzinotas A.** (2017). Complete genome sequence of Alteromonas virus vB_AspP-H4/4. *Genome Announcements* 5(43), e00914-17
60. Bock C., **Chatzinotas A.**, Boenigk J. (2017). Genetic diversity in chrysophytes: Comparison of different gene markers. *Fottea* 17(2): 209–221
59. **Johnke J.**, Boenigk J., Harms H., **Chatzinotas A.** (2017). Killing the killer: Predation between protists and predatory bacteria. *FEMS Microbiology Letters* 364 (9): fnx089
58. Geisen S., Mitchell E.A.D., Wilkinson D.M., Adl S., Bonkowski M., Brown M.W., Fiore-Donno A. M., Heger T.J., Jassey V.E.J., Krashevskaya V., Lahr D.J.G., Marcisz K., Mulot M., Payne R., Singer D., Anderson O.R., Charman D.J., Ekelund F., Griffiths B.S., Rønn R., Smirnov A., Bass D., Belbahri L., Berney C., Blandinier Q., **Chatzinotas A.**, Clarholm M., Dunthorn M., Feest A., Fernández L.D., Foissner W., Fournier B., Gentekaki E., Hajek M., Helder J., Jousset A., Koller R., Kumar S., La Terza A., Lamentowicz M., Mazei Y., Santos S.S., Seppey C.V.W., Spiegel F.W., Walochnik J., Winding A., Lara E. (2017). Soil protistology rebooted: 30 fundamental questions to start with. *Soil Biology and Biochemistry* 111: 94–103
57. **Karakoç C.**, Singer A., Johst K., Harms H., **Chatzinotas A.** (2017). Transient recovery dynamics of a predator-prey system under press and pulse disturbances. *BMC Ecology* 17: 13
56. Jousset A., Bienhold C., **Chatzinotas A.**, Gallien L., Gobet A., Kurm V., Küsel K., Rillig M.C., Rivett D.W., Salles J.F., van der Heijden M.G. (2017). Where less may be more: how the rare biosphere pulls ecosystems strings. *The ISME Journal* 11: 853–862
55. Perruchon C., **Chatzinotas A.**, Omirou M., Vasileiadis S., Karpouzias D.G. (2017). Isolation of a bacterial consortium able to degrade the fungicide thiabendazole: the key role of a Sphingomonas phylotype. *Applied Microbiology and Biotechnology* 101(9): 3881-3893

54. **Kallies R., Kiesel B.**, Schmidt M., Kacza J., **Ghanem N., Narr A.**, Zopfi J., Wick L.Y., Hackermüller J., Harms H., **Chatzinotas A.** (2017). Complete genome sequence of *Pseudoalteromonas* phage vB_PspS-H40/1 (formerly H40/1) that infects *Pseudoalteromonas* sp. strain H40 and is used as biological tracer in hydrological transport studies. *Standards in Genomic Sciences* 12:20

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53. **Ghanem N., Kiesel B., Kallies R.**, Harms H., **Chatzinotas A.**, Wick L. (2016). Marine phages as tracers: effects of size, morphology, and physico-chemical surface properties on transport in a porous medium. *Environmental Science & Technology* 50: 12816–12824

52. Steinauer K., **Chatzinotas A.**, Eisenhauer N. (2016) Root exudate cocktails: the link between plant diversity and soil microorganisms. *Ecology and Evolution* 20: 7387-7396

51. Grossmann L., Beisser D., Bock C., **Chatzinotas A.**, Jensen M., Preisfeld A., Psenner R., Rahmann S., Wodniok S., Boenigk J. (2016). Trade-off between taxon diversity and functional diversity in European lake ecosystems. *Molecular Ecology* 23: 5876-5888

50. **Saleem M., Fetzer I.**, Harms H., **Chatzinotas A.** (2016). Trophic complexity in aqueous systems: Bacterial species richness and protistan predation regulate dissolved organic carbon and dissolved total nitrogen removal. *Proceedings of the Royal Society B: Biological Sciences* 283: 20152724

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48. **Fetzer I.**, Johst K., **Schäwe R.**, Banitz T., Harms H., **Chatzinotas A.** (2015). The extent of functional redundancy changes as species' roles shift in different environments. *Proceedings of the National Academy of Sciences of the USA* 112: 14888-14893 (**F1000Prime article recommendation**)

47. **Glaser K., Kuppardt A.**, Boenigk J., **Fetzer I.**, Harms H., **Chatzinotas A.** (2015). The influence of environmental factors on protistan microorganisms in grassland soils along a land-use gradient. *Science of the Total Environment* 537: 33-42

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44. **Kuppardt A.**, Kleinsteuber S., Vogt C., Lüders T., Harms H., **Chatzinotas A.** (2014). Phylogenetic and functional diversity within toluene-degrading, sulphate-reducing consortia enriched from a contaminated aquifer. *Microbial Ecology* 68:222-234
43. Krohn S., Böhm S., Engelmann C., Hartmann J., Brodzinski A., **Chatzinotas A.**, Zeller K., Prywerek D., **Fetzer I.**, Berg T (2014). Application of qualitative and quantitative real-time PCR, direct sequencing and T-RFLP for the detection and identification of polymicrobial 16S rRNA genes in ascites. *Journal of Clinical Microbiology* 52: 1754-1757
42. **Johnke J.**, Cohen Y., de Leeuw M., Kushmaro A., Jurkevitch E., **Chatzinotas A.** (2014). Multiple micro-predators controlling bacterial communities in the environment. *Current Opinion in Biotechnology* 27:185–190
41. **Glaser K.**, **Kuppardt A.**, **Krohn S.**, **Heidtmann A.**, Harms H., **Chatzinotas A.** (2014). Primer pairs for the specific environmental detection and T-RFLP analysis of the ubiquitous flagellate taxa Chrysophyceae and Kinetoplastea. *Journal of Microbiological Methods* 100: 8-16
40. Allan E., Bossdorf O., Dormann C.F., Prati D., Gossner M., Blüthgen N., Barto K., Bellach M., Birkhofer K., Boch S., Böhm S., Börschig C., **Chatzinotas A.**, Christ S., Daniel R., Diekötter T., Fischer C., Friedl T., **Glaser K.**, Hallmann C., Hodac L., Hölzel N., Jung K., Klein A. M., Klaus V.H., Kleinebecker T., Krauss J., Lange M., Morris E.K., Müller J., Nacke H., Pašalić E., Rillig M.C., Rothenwöhrer C., Schall P., Scherber C., Schulze W., Socher S.A., Steckel J., Steffan-Dewenter I., Türke M., Weiner C.N., Werner M., Westphal C., Wolters V., Wubet T., Gockel S., Gorke M., Hemp A., Renner S.C., Schöning I., Pfeiffer S., König-Ries B., Buscot F., Linsenmair K.E., Schulze E.-D., Weisser W.W., Fischer M. (2014). Interannual variation in land-use intensity enhances grassland multidiversity. *Proceedings of the National Academy of Sciences of the USA* 111: 308-313

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38. **Saleem M.**, **Fetzer I.**, Harms H., **Chatzinotas A.** (2013). Diversity of protists and bacteria determines predation performance and stability. *The ISME Journal* 7: 1912-1921 (**F1000Prime article recommendation**)
37. **Giebler J.**, Wick L.Y., Schlöter M., Harms H., **Chatzinotas A.** (2013). Evaluating the assignment of alkB T-RFs and sequence types to distinct bacterial taxa. *Applied and Environmental Microbiology* 79: 3129-3132
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33. Siegfried K., **Endes C.**, Khaled Bhuiyan A.F.M., **Kuppardt A.**, Mattusch J., van der Meer J.R., **Chatzinotas A.**, Harms H. (2012). Field testing of arsenic in groundwater samples of Bangladesh using a test kit based on lyophilized bioreporter bacteria. *Environmental Science and Technology* 46: 3281–3287
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28. Foit K., **Chatzinotas A.**, Liess M. (2010). Short-term disturbance of a grazer has long-term effects on bacterial communities - Relevance of trophic interactions for recovery from pesticide effects. *Aquatic Toxicology* 99:205-211
27. **Kuppardt A.**, Vetterlein D., Harms H., **Chatzinotas A.** (2010). Visualisation of gradients in arsenic concentrations around individual roots of *Zea mays* L. using agar-immobilized bioreporter bacteria. *Plant and Soil* 329: 295-306
26. Herrmann S., Kleinstaub S., **Chatzinotas A.**, **Kuppardt S.**, Lueders T., Richnow H.-H., Vogt C. (2010). Functional characterisation of an anaerobic benzene-degrading enrichment culture by DNA stable isotope probing. *Environmental Microbiology* 12: 401-411 (*F1000Prime article recommendation*)
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23. Wu Q. L.*, **Chatzinotas A.***, Wang J., Boenigk J. (2009). Genetic diversity of eukaryotic plankton assemblages in eastern Tibetan lakes differing by their salinity and altitude. *Microbial Ecology* 58:569–581 (*equal contribution)
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20. **Kuppardt A.**, **Chatzinotas A.**, Breuer U., van der Meer J. R., Harms H. (2009). Optimization of preservation conditions of As (III) bioreporter bacteria. *Applied Microbiology and Biotechnology* 82: 785-792
19. Fountoulakis M.S., Terzakis S., **Chatzinotas A.**, Brix H., Kalogerakis N., Manios T. (2009). Pilot-scale comparison of constructed wetlands operated under high hydraulic loading rated and attached biofilm reactors for domestic wastewater treatment. *Science of the Total Environment* 407: 2996-3003
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16. **Wackwitz A.**, Harms H., **Chatzinotas A.**, Breuer U., Vogne C., van der Meer J. R. (2008). Internal arsenite bioassay calibration using multiple bioreporter cell lines. *Microbial Biotechnology* 1: 149-157
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