

PUBLICATION-LIST of Gerhard J. Herndl as of 15 Nov 2023Publications in Peer-Reviewed Journals

- 295) Jiao, N, Q. Chen, Z. Zhao, X. Xiao, T. Luo, J. Liu, Z. Jian, S. Xie, H. Thomas, G.J. Herndl, R. Benner, M. Gonsior, F. Chen, W. Cai, C. Robinson, in press: Role of microbe driven carbon cycling in climate change. Nat. Rev. Microbiol.,
- 294) Orel, N., E. Fadeev, G.J. Herndl, V. Turk, T. Tinta, submitted: How to recover a high-quality bacterial genome from a non-axenic culture? The case of the marine *Vibrio campbellii*. BMC Genetics
- 293) Frade, P., C. Roch, B.C.C. Hume, H. Sattmann, G.J. Herndl, E. Haring, submitted: Generation of 19th century symbiont association baselines demonstrates an increased prevalence of thermotolerant associations of present day Red Sea corals. Science Total Environment,
- 292) Zhao, Z., C. Amano, T. Reinthaler, F. Baltar, M.V. Orellana, G.J. Herndl, submitted: Metaproteomic analysis decodes the trophic basis of microbes in the dark ocean. Nature,
- 291) Zhao, Z., G.J. Herndl, submitted: Substrate acquisition pattern reveals niche separation of deep-sea microbes. Limnol. Oceanogr. Lett.,
- 290) Amaral, V., J. Forja, B. Mähnert, G.J. Herndl, C. Romera-Castillo, submitted: Dissolved free amino acids in estuarine systems: sources, distribution and implication for DOM reactivity. Org. Geochemistry,
- 289) Damashek, J., B. Bayer, G.J. Herndl, N.J. Wallsgrove, T. Allen, B.N. Popp, J.T. Hollibaugh, submitted: Limited accessibility of nitrogen supplied as amino acids, amides, and amines as energy sources for selected marine Thaumarchaeota. Environ. Microbiol.
- 289) Zhao, Z., F. Baltar, G.J. Herndl, submitted: Decoupling between genetic potential and the metabolic regulation and expression in microbial organic matter cleavage across microbiomes. PLoS Biology,
- 288) Sintes, E., D. De Corte, T. Yokokawa, K. Olbrich, J. Aristegui, G.J. Herndl, in press: Phylogeny of metabolically active heterotrophic Bacteria in the deep Atlantic. Environ. Microbiol.,
- 287) Tang, W., B. Ward, M. Beman, L. Bristow, D. Clark, S. Fawcett, C. Frey, F. Fripiat, G.J. Herndl, M. Mdotyana, F. Paulot, X. Peng, A.E. Santoro, T. Shiozaki, E. Sintes, C. Stock, X. Sun, X.S. Wan, M. Xu, Y. Zhang, 2023:

- Database of nitrification and nitrifiers in the global ocean. *Earth System Science Data*, 15: 5039-5077; doi.org/10.5194/essd-2023-194
- 286) Alekseyeva, K.S., G.J. Herndl, F Baltar, 2023: Release of cell-free enzymes by marine pelagic fungal strains. *Front. Fungal Biology*, 4; doi: 10.3389/ffunb.2023/1209265
- 285) Srivastava, A., DeCorte, D, J.A.L. Garcia, B. Swan, R Stepanauskas, G.J. Herndl, E. Sintes, 2023: Interplay between autotrophic and heterotrophic prokaryotic metabolism in the bathypelagic realm revealed by metatranscriptomic analyses. *BMC Microbiome*, 11: 239; <https://doi.org/10.1186/s40168-023-01688-7>
- 284) Debeljak, P., B. Bayer, Y. Sun, G.J. Herndl, I. Obernosterer, 2023: Seasonal patterns in microbial carbon and iron transporter expression in the Southern Ocean. *BMC Microbiome*, 11: 187; <https://doi.org/10.1186/s40168-023-01600-3>
- 283) Tinta, T., Z. Zhao, B. Bayer, G.J. Herndl, 2023: Jellyfish detritus supports niche partitioning and metabolic interactions among pelagic marine bacteria. *BMC Microbiome*, 11:156; <https://doi.org/10.1186/s40168-023-01598-8>
- 282) Baltar, F, C. Martinez-Perez, C. Amano, M. Vial, S. Robaina-Estevez, T. Reinthaler, Z. Zhao, R. Logares, G. J. Herndl, S.E. Morales, J.M. Gonzalez, 2023: A ubiquitous gammaproteobacterial clade dominates expression of sulfur cycling genes across the mesopelagic ocean. *Nature Microbiol.*, 8: 1137-1148; <https://doi.org/10.1038/s41564-023-01374-2>
- 281) Fadeev, E., C. Carpaneto Bastos, J. Hennenfeind, S.J. Biller, D. Sher, M. Wietz, G.J. Herndl, 2023: Characterization of membrane vesicles in *Alteromonas macleodii* indicates potential functional roles in their copiotrophic lifestyle. *microLife*, 4: 1-11; doi: 10.1093/femsm/luqac025
- 280) Herndl, G.J., F. Baltar, B. Bayer, T. Reinthaler, 2023: Prokaryotic life in the deep ocean's water column. *Annu. Rev. Mar. Sci.*, 15: 461-483; doi: 10.1146/annurev-marine-032122-115655
- 279) Amano, C., T. Reinthaler, E. Sintes, M.M. Varela, J. Stefanschitz, S. Kaneko, Y. Nakano, W. Borchert, G.J. Herndl, M. Utsumi, 2023: A device for assessing microbial activity under ambient hydrostatic pressure: The in situ microbial incubator (ISMI). *Limnol. Oceanogr. Methods*, 21: 69-81; doi:10.1002/lom3.10528

- 278) Munson-McGee, J.H., M.R. Lindsay, J.M. Brown, E. Sintes, T. D-Angelo, J. Brown, L.C. Lubelczyk, P. Tomoko, D. Emerson, B.N. Orcutt, N.J. Poulton, G.J. Herndl, R. Stepanauskas, 2022: Decoupling of respiration rates and abundance in marine prokaryoplankton. *Nature*, 612: 764-770; doi.org/10.1038/s41586-022-05505-3
- 277) Korlevic, M., M. Markovksi, G.J. Herndl, M. Najdek, 2022: Temporal variation in the prokaryotic community of a nearshore marine environment. *Scientific Rep.*, 12: 16859; doi.org/101038/s41598-022-20954-6
- 276) Amano, C., E. Sintes, T. Reinthaler, J. Stefanschitz, M. Kisadur, M. Utsumi, G.J. Herndl, 2022: Limited carbon cycling due to high pressure effects on the deep sea microbiome. *Nature Geosci.*, 15: 1041-1047; doi.org/10/1038/s41561-022-01081-3
- 275) Conte, M.H. R, Pedrosa Pamies, M. Honda, G.J. Herndl, 2022: Editorial: The oceanic particle flux and its cycling within the deep water column. *Front. Earth Sci.*, 10:1020065; doi: 10.3389/feart.2022.1020265
- 274) Markovski, M., M. Najdek, G.J. Herndl, M. Korlevic, 2022: Compositional stability of sediment microbial communities during a seagrass meadow decline. *Front. Mar. Sci.*, 9: doi: 10.3389/fmars2022.966070
- 273) Breyer, E., Z. Zhao, G.J. Herndl, F. Baltar, 2022: Global contribution of pelagic fungi to protein degradation in the ocean. *Microbiome*, <https://doi.org/10.1186/s40168-022-01329-5>
- 272) Alekseyeva, K.S., G.J. Herndl, F Baltar, 2022: Extracellular enzymatic activities of oceanic pelagic fungal strains and the influence of temperature. *J. Fungi*, 8: 571; doi: 10.3390/jof8060571
- 271) Malfertheiner, L., C. Martinez-Perez, Z. Zhao, G.J. Herndl, F. Baltar, 2022: Phylogeny and metabolic potential of the candidate phylum SAR324. *Biology* 11, 599; doi.org/10.3390/biology11040599
- 270) Pinto, M., Z. Zhao, K. Klun, E. Libowitzky, G.J. Herndl, 2022: Microbial consortiums of putative degraders of low-density polyethylene-associated compounds in the ocean. *mSystems*, 7, e01415-21, doi: <https://doi.org.10.1128/msystems.01415-21>
- 269) Martinez-Perez, C., C. Greening, Z. Zhao, R.L. Lappan, S.K. Bay, D. DeCorte, C. Hulbe, C. Ohneiser, C. Stevens, B. Thomson, R. Stepanauskas, J.M. Gonzalez, R. Logares, G.J. Herndl, S.E. Morales, F. Baltar, 2022:

- Phylogenetically and functionally diverse microorganisms reside under the Ross Ice Shelf. *Nature Comm.*, 13:117; doi.org/10.1038/s4167-021-27769-5
- 268) Salazar Alekseyeave, K., B. Mähner, F. Berthiller, E. Breyer, G.J. Herndl, F. Baltar, 2021: Adapting an ergosterol extraction method for the quantification of oceanic fungal biomass. *J. Fungi*, 7: 690; doi: doi.org/10.3390/jof7090690
- 267) De Corte, D., S. Muck, J. Tiroch, C. Mena, G.J. Herndl, E. Sintes, 2021: Microbes mediating the sulfur cycle in the deep Atlantic Ocean and their link to chemolithoautotrophy. *Environ. Microbiol.*, 23: 7152-7167; doi:10.1111/1462-2920.15759
- 266) Korlevic, M., M. Markovski, Z. Zhao, G.J. Herndl, M. Najdek, 2021: Seasonal dynamics of epiphytic microbial communities on marine macrophyte surfaces. *Front. Microbiol.* 12:671342. doi: 10.3389/fmicb.2021.671342
- 265) Braun, A., M. Spona-Friedl, M. Avramov, M. Elsner, F. Baltar, T. Reinthaler, G.J. Herndl, C. Griebler, 2021: Reviews and syntheses: Heterotrophic fixation of inorganic carbon – significant but invisible flux in global carbon cycling. *Biogeosciences*, 18: 3689-3700; doi:org/10.5194/bg-18-3689-2021
- 264) Srivastava, A., D.M. Saavedra, B. Thomson, J.A.L. Garcia, Z. Zhao, W.M. Patrick, G.J. Herndl, F. Baltar, 2021: Enzyme promiscuity in natural environments: alkaline phosphatase in the ocean. *The ISME J.*; doi: 10.1038/s41396-021-01013-w
- 263) Korlevic, M., M. Markovski, Z. Zhao, G.J. Herndl, M. Najdek, 2021: Selective DNA and protein isolation from marine macrophyte surfaces. *Frontiers Microbiol.*, 12:665999; doi: 10.3389/fmicrb.2021.665999
- 262) Baltar, F., Z. Zhao, G.J. Herndl, 2021: Potential and expression of carbohydrate utilization by marine fungi in the global ocean. *Microbiome*, 9: 106; <https://doi.org/10.1186/s40168-021-01063-4>
- 261) Tinta, T., K. Klun, G.J. Herndl, 2021: The importance of jellyfish-microbe interactions for biogeochemical cycles in the ocean. *Limnol. Oceanogr.*, 66: 2011-2032; doi: 10.1002/lno.11741
- 260) Jiao, N., J. Liu, B. Edward, Z. Lv, R. Cai, Y. Liu, X. Xiao, J. Wang, F. Jiao, R. Wang, X. Huang, B. Guo, J. Sun, R. Zhang, Y. Zhang, K. Tang, Q. Zheng, F. Azam, J. Batt, W.-J. Cai, C. He, G.J. Herndl, P. Hill, D. Hutchins, J. LaRoche, M. Lewis, H. MacIntyre, L. Polimene, C. Robinson, Q. Shi, C.A. Suttle, H. Thomas, D. Wallace, L. Legendre, 2021: Correcting a major error in assessing

- organic carbon pollution in natural waters. *Science Advances*, 7: eabc7318;
doi: 10.1126/sciadv.abc7318
- 259) Baltar, F., X.A. Alvarez-Salgado, J. Aristegui, R. Benner, D.A. Hansell, G.J. Herndl, C. Lønborg, 2021: What is refractory organic matter in the ocean? *Front. Mar. Sci.*, 8: 642637; doi: 10.3389/fmars.2021.642637
- 258) Glatzel, S., G.J. Herndl, 2021: Recognizing the complexity of soil organic carbon dynamics in vegetated coastal habitats. *Glob. Change Biol.*, 27: 3-4; doi: org/10.1111/gcb.15348
- 257) Orel, N., E. Fadeev, A. Obiol, E. Sintes, T. Rattei, G.J. Herndl, 2020: Bacterial indicators are ubiquitous member of the pelagic microbiome in anthropogenically impacted coastal ecosystems. *Front. Microbiol.*, 12; <https://doi.org/10.3389/fmicb.2021.765091>
- 256) Najdek, M., M. Korlević, P. Paliaga, M. Markovski, I. Ivančić, L. Iveša, I. Felja, G.J. Herndl, 2020: Effects of the invasion of *Caulerpa cylindracea* in a *Cymodocea nodosa* meadow in the Northern Adriatic Sea. *Front. Mar. Sci.*, 7: 602055; doi: 10.3389/fmars.2020.602055
- 255) Steiner, P., J. Geijo, E. Fadeev, A. Obiol, E. Sintes, T. Rattei, G.J. Herndl, 2020: Functional seasonality of free-living and particle-associated prokaryotic communities in the coastal Adriatic Sea. *Front. Microbiol.*, 11: 584222; doi: 10.3389/fmicb.2020.584222
- 254) Tinta, T., Z. Zhao, A. Escobar, K. Klun, B. Bayer, C. Amano, L. Bamonti, G.J. Herndl, 2020: Microbial processing of jellyfish detritus in the ocean. *Front. Microbiol.*, 11:590995; doi: 10.3389/fmicb.2020.590995
- 253) Pinto, M. P. Zenner, T. Langer, J. Harrison, M. Simon, M.M. Varela, G.J. Herndl, 2020: Putative degraders of low-density polyethylene-derived compounds are ubiquitous members of plastic-associated bacterial communities in the marine environment. *Environ. Microbiol.*, 22: 4779-4793; doi:10.1111/1462-2920.15232
- 252) Thomson, B., J. Wenley, S. Lockwood, I. Twigg, K. Currie, G.J. Herndl, C.D. Hepburn, F. Baltar, 2020: Relative importance of phosphodiesterase vs. phosphomonoesterase (alkaline phosphatase) activities for dissolved organic phosphorus hydrolysis in epi- and mesopelagic waters. *Frontiers Earth Science*, doi: 10.3389/feart.2020.560893

- 251) Clifford, E.L., D. DeCorte, V. Oritz, P. Paliaga, I. Ivancic, M. Najdek, G.J. Herndl, E. Sintes, 2020: Mesozooplankton taurine production and prokaryotic uptake in the northern Adriatic Sea. *Limnol. Oceanogr.*, 65: 2730-2747; doi: 10.1002/lno.11544
- 250) Mooshammer, M., R.J.E. Alves, B. Bayer, M. Melcher, M. Stieglmeier, L. Jochum, S. K.-M.R. Rittmann, M. Watzka, C. Schleper, G.J. Herndl, W. Wanek, 2020: Nitrogen isotope fractionation during archaeal ammonia oxidation: coupled estimates from measurements of residual ammonium and accumulated nitrite. *Frontiers Microbiology*, 11, 1710; doi: 10.3389/fmicb.2020.01710
- 249) Najdek, M., M. Korlević, P. Paliaga, M. Markovski, I. Ivančić, L. Iveša, I. Felja, G.J. Herndl, 2020: Dynamics of environmental conditions during a decline of a *Cymodocea nodosa* meadow. *Biogeoscience*, 17: 3299-3315, doi:10.5194/bg-17-32999-2020
- 248) Weinbauer, M.G., C. Griebler, H.M. van Aken, G.J. Herndl, 2020: Viral infection of prokaryotic plankton during early formation of the North West Atlantic Deep Water. *Aquat. Microb. Ecol.*, 84: 175-189; doi: doi.org/10.3354/ame01934
- 247) Zhao, Z., F. Baltar, G.J. Herndl, 2020: Linking extracellular enzymes to phylogeny indicates a predominantly particle-associated lifestyle of deep-sea prokaryotes. *Science Advances*, 6: eaaz4354
- 246) Chen, M.L., E.D. Becraft, M. Pachiadaki, J.M. Brown, J.K. Jarett, J.M. Gasol, N.V. Ravin, D.P. Moser, T. Nunoura, G.J. Herndl, T. Woyke, R. Stepanauskas, 2020: Hiding in plain sight: the globally distributed bacterial candidate phylum PAUC34f. *Frontiers Microbiol.*, 11:376; doi: 10.3389/fmicrob.2020.00376
- 245) Zhang, Y., L. Hou, X. Wan, Z. Zhao, W. Qin, N. Jiao, S.-J. Kao, K. Tang, X. Xie, J. Shen, C. Liu, Y. Li, M. Chen, X. Dai, W. Deng, L. Liu, H. Li, D.A. Stahl, G.J. Herndl, 2020: Nitrifier adaptation to low energy flux controls inventory of reduced nitrogen in the dark ocean. *Proc. Natl. Acad. Sci. USA*, 117: 4823-4830; doi.org/10.1073/pnas.1912367117
- 244) Bellou, N., J.A. Garcia, F. Colijn, G.J. Herndl, 2020: Seasonality combined with the orientation of surfaces influences the microbial community structure of biofilms in the deep Mediterranean Sea. *Deep Sea Res. II*, 171:104703

- 243) Bochdansky, A.B., R.B. Dunbar, D.A. Hansell, G.J. Herndl, 2019: Estimating carbon flux from optically recording total particle volume at depths below the primary pycnocline. *Front. Mar. Sci.*, 6: 778; doi: 10.3389/fmars.2019.00778
- 242) Bayer, B., R.L. Hansman, M.J. Bittner, B.E. Noriega-Ortega, J. Niggemann, T. Dittmar, G.J. Herndl, 2019: Ammonia-oxidizing archaea release a suite of organic compounds potentially fueling prokaryotic heterotrophy in the ocean. *Environ. Microbiol.*, 21: 4062-4075; doi:10.1111/1462-2920.14755
- 241) Baltar, F., B. Bayer, N. Bednarsek, S. Deppeler, R. Escibano, C.E. Gonzalez, R.L. Hansman, R. Kanta Mishra, M.A. Moran, D.J. Repeta, C. Robinson, E. Sintes, C. Tamburini, L.E. Valentin, G.J. Herndl, 2019: Towards integrating evolution, metabolism and climate change studies of marine ecosystems. *Trends Ecology and Evolution*, 34: 1022-1033; doi.org/10.1016/j.tree.2019.07.003
- 240) Baltar, F., G.J. Herndl, 2019: Ideas and perspectives: Is dark carbon fixation relevant for oceanic primary production estimates? *Biogeosciences*, 16: 3793-3799; doi.org/10.5194/bg-16-3793-2019
- 239) Steiner, P.A., E. Sintes, Daniele de Corte, D. Marić-Pfannkuchen, I. Ivancic, M. Najdek, R. Simo, G.J. Herndl, 2019: Seasonal dynamics of the marine snow-associated and free-living demethylating bacterial community in the coastal Mediterranean Sea. *Environ. Microbiol. Rep.*, 11: 699-707; doi: 10.1111/1758-2229.12783
- 238) Muck, S., D. De Corte, E. Clifford, B. Bayer, G.J. Herndl, E. Sintes, 2019: Niche differentiation of aerobic and anaerobic ammonia oxidizers in a high latitude deep oxygen minimum zone. *Front. Microbiol.*, 10:2141. doi: 10.3389/fmicb.2019.02141
- 237) De Corte, D., J. Martinez Martinez, M.S. Cretoiu, Y. Takaki, T. Nunoura, E. Sintes, G.J. Herndl, T. Yokokawa, 2019: Viral communities in the global deep ocean conveyor belt assessed by targeted viromics. *Front. Microbiol.*, 10, article 1801; doi:10.3389/fmicb.2019.01801
- 236) Thomson, B., J. Wenley, K. Currie, C. Hepburn, G.J. Herndl, F. Baltar, 2019: Resolving the paradox: continuous cell-free alkaline phosphatase activity despite high phosphate concentrations. *Mar. Chem.*, 214: doi:10.1016/j.marchem.2019.103671

- 235) Steiner, P., D. De Corte, J. Geijo, C. Mena, T. Yokokawa, T. Nunoura, T. Rattei, G.J. Herndl, E. Sintes, 2019: Highly variable mRNA half-life time within marine prokaryotic taxa and functional genes. *Environ. Microbiol.*, 78: 299-312; doi: 10.1007/s00248-019-01320-y
- 234) Köstner, M., K. Jürgens, M. Labrenz, G.J. Herndl, C. Winter, 2019: Uneven host cell growth causes lysogenic virus induction in the Baltic Sea. *PLoS One*, 14, e0220716; doi: 10.1371/journal.pone.0220716
- 233) Clifford, E.L., M.M. Varela, D. De Corte, A. Bode, V. Ortiz, G.J. Herndl, E. Sintes, 2019: Taurine is a major carbon and energy source for marine prokaryotes in the North Atlantic Ocean off the Iberian peninsula. *Microb. Ecol.*, 78: 299-312; doi:10.1007/s00248-01320-y
- 232) Bayer, B., C. Pelikan, M.J. Bittner, T. Reinthaler, M. Könneke, G.J. Herndl, P. Offre, 2019: Proteomic response of three marine ammonia-oxidizing Archaea to hydrogen peroxide and their metabolic interactions with heterotrophic Alphaproteobacterium. *mSystems* 4:e0018119. <https://doi.org/10.1128/mSystems.00181-19>.
- 231) De Corte, D., G. Paredes, T. Yokokawa, E. Sintes, G.J. Herndl, 2019: Differential response of *Cafeteria roenbergensis* to different bacterial and archaeal prey characteristics. *Microb. Ecol.*, 78: 1-5, doi: 10.1007/s00248-018-1293-y
- 230) Pinto, M., T. Langer, T. Hüffer, T. Hofmann, G.J. Herndl, 2019: The composition of bacterial communities associated with plastic biofilms differs between different polymers and stage of biofilm succession. *PLoS One*, 14: e0217165; doi.org/10.1371/journal.pone.0217165
- 229) Bayer, B., J. Vojvoda, T. Reinthaler, C. Reyes, M. Pinto, G.J. Herndl, 2019: *Nitrosopumilus adriaticus* sp. nov. and *Nitrosopumilus piranensis* sp. nov., two ammonia-oxidizing Archaea from the Adriatic Sea and members of the class Nitrososphaeria. *Int. J. Syst. Evolut. Microbiol.*, 69: 1892-1902; DOI 10.1099/ijsem.0.003360
- 228) Morales, S.E., A. Biswas, G.J. Herndl, F. Baltar, 2019: Global structuring of phylogenetic and functional diversity by depth and temperature of pelagic fungi. *Front. Mar. Sci.*, 6: Article # 131; doi: 10.3389/frmars.2019.00131
- 227) Tinta, T., T. Kogovšek, K. Klun, A. Malej, G.J. Herndl, V. Turk, 2019: Jellyfish-

- associated microbiome in the marine environment: exploring its biotechnological potential. *Marine Drugs*, 17, 94; doi:10.3390/md17020094
- 226) Ivancic, I., P. Paliaga, M. Pfannkuchen, T. Djakovac, M. Najdek, P. Steiner, M. Korlevic, M. Markovski, A. Baricevic, M.S. Tankovic, G.J. Herndl, 2018: Seasonal variation of extracellular enzymatic activity in marine snow-associated microbial communities and their impact on the surrounding water. *FEMS Microb. Ecol.*, 94 (12); doi: 10.1093/femsec/fiy198
- 225) Engelen, A.H., T. Aires, M.J.A. Vermeij, G.J. Herndl, E.A. Serrão, P.R. Frade, 2018: Host differentiation and compartmentalization of microbial communities in the azooxanthellate cupcorals *Tubastrea coccinea* and *Rhizopsammia goesi* in the Caribbean. *Front. Mar. Sci.*, 5:391; doi:10.3389/fmars.2018.00391
- 224) Romera-Castillo, C., M Pinto, T.M. Langer, X.A. Alvarez-Salgado, G.J. Herndl, 2018: Dissolved organic carbon leaching from plastics stimulates microbial activity in the ocean. *Nature Communications*, 9: 1430; doi: 10.1038/s41467-018-03798-5
- 223) Winter, C., N. Köstner, C.-P. Kruspe, D. Urban, S. Muck, T. Reinthaler, G.J. Herndl, 2018: Mixing alters the lytic activity of viruses in the dark ocean. *Ecology*, 99: 700-713
- 222) Guerrero-Feijóo, E., E. Sintes, G.J. Herndl, M.M. Varela, 2018: High dark inorganic carbon fixation rates by specific microbial groups off the Galician coast (NW Iberian margin). *Environ. Microbiol.*, 20: 602-611
- 221) De Corte, D., A. Sristava, M. Koski, J.A.L. Garcia, Y. Takaki, T. Yokokawa, T. Nunoura, N.H. Elisabeth, G.J. Herndl, E. Sintes, 2018: Metagenomic insights into zooplankton-associated bacterial communities. *Environ. Microbiol.*, 20: 492-505
- 220) Bergauer, K., A. Fernandez-Guerra, J.A. Garcia, R.R. Sprenger, R. Stepanauskas, M. Pachiadaki, O.N. Jensen, G.J. Herndl, 2018: Organic matter processing by microbial communities throughout the Atlantic water column as revealed by metaproteomics. *Proc. Natl. Acad. Sci. USA*, 115(3): E400-E408
- 219) Pachiadaki, M., E. Sintes, K. Bergauer, J.M. Brown, N.R. Record, B.K. Swan, M.E. Mathyer, S.J. Hallam, P. Lopez-Garcia, Y. Takaki, T. Nunoura, T. Woyke, G.J. Herndl, R. Stepanauskas, 2017: Major role of nitrite-oxidizing

- bacteria in the dark ocean carbon fixation. *Science*, 358: 1046-1051; DOI: 10.1126/science.aan8260
- 218) Clifford, E.L., D. Hansell, M.M. Varela, M. Nieto-Cid, G.J. Herndl, E. Sintes, 2017: Dissolved taurine release by crustacean zooplankton in the oceanic water column. *Limnol. Oceanogr.*, 62: 2745-2758; doi: 10.1002/lno.10603
- 217) Elling, F.J., M. Könneke, G.W. Nicol, M. Stieglmeier, B. Bayer, E. Spieck, J.R. de la Torre, K.W. Becker, M. Thomm, J.I. Prosser, G.J. Herndl, C. Schleper, K.-U. Hinrichs, 2017: Chemotaxonomic characterization of the thaumarchaeal lipidome. *Environ. Microbiol.*, 19: 2681-2700; doi: 10.1111/1462-2920.13759
- 216) Köstner, N., L. Scharnreitner, K. Jürgens, M. Labrenz, G.J. Herndl, C. Winter, 2017: High viral abundance as a consequence of low viral decay in the Baltic Sea redoxcline. *PLoS One*, 12(6): e0178467.
- 215) Landry Z., B.K. Swan, G.J. Herndl, R. Stepanauskas, S. Giovannoni, 2017: SAR202 genomes from the dark ocean predict pathways for the oxidation of recalcitrant dissolved organic matter. *mBIO*, 8 (2), e00413-17
- 214) Glasl, B., P. Bongaerts, N.H. Elisabeth, O. Hoegh-Guldberg, G.J. Herndl, P.R. Frade, 2017: Microbiome variation in corals with distinct depth-distribution ranges across a shallow-mesophotic gradient (15-85 m). *Coral Reefs*, 36: 447-452; doi: 10.1007/s00338-016-1517-x
- 213) Debeljak, P., M. Pinto, M. Proitti, J. Reisser, F.F. Ferrari, B. Abbas, M.C.M. van Loosdrecht, B. Slat, G.J. Herndl, 2017: Extracting DNA from ocean microplastics: a method comparison study. *Analytical Methods*, 9: 1521-1526; doi: 10.1039/C6AY03119f
- 212) Bochdansky, A.B., M.A. Clouse, G.J. Herndl, 2017: Eukaryotic microbes, principally fungi and labyrinthulomycetes, dominate biomass on bathypelagic marine snow. *The ISME J.*, 11: 362-373; doi:10.1038/ismej.2016.113
- 211) Glasl, B., G.J. Herndl, P.R. Frade, 2016: The microbiome of coral surface mucus plays a key role in mediating holobiont health and survival upon disturbance. *The ISME J.*, 10: 2280-2292; doi:10.1038/ismej.2016.9
- 210) Baltar, F., D. Lundin, J. Palovaara, I. Lekunberri, T. Reinthaler, G.J. Herndl, J. Pinhassi, 2016: Prokaryotic responses to ammonium and organic carbon reveal alternative CO₂ fixation pathways and importance of alkaline phosphatase in the mesopelagic North Atlantic. *Frontiers. Microbiol.*, 7:1670. doi: 10.3389/fmicb.2016.01670

- 209) Lønborg, C., L. A. Cuevas, T. Reinthaler, G.J. Herndl, J.M. Gasol, X.A.G. Moran, N.R. Bates, X.A. Alvarez-Salgado, 2016: Depth dependent relationships between temperature and ocean heterotrophic prokaryotic production. *Frontiers Mar. Sci.*, 3: doi.org/10.3389/fmars.2016.00090
- 208) Piquet, A.M-T., D.S. Maat, V. Confurius-Guns, E. Sintes, G.J. Herndl, W.H. van de Poll, C. Wiencke, A.G.J. Buma, H. Bolhuis, 2016: Springtime dynamics, productivity and activity of prokaryotes in two Arctic fjords. *Polar Biol.*, 10: 1749-1763; DOI 10.1007/s00300-015-1866-x
- 207) Frank, A.H., B. Pontiller, G.J. Herndl, T. Reinthaler, 2016: Erythromycin and GC-7 fail as domain-specific inhibitors for bacterial and archaeal activity in the open ocean. *Aquat. Microb. Ecol.*, 77: 99-110; doi: 10.3354/ame01792
- 206) Frank, A.H., J.A. Garcia, G.J. Herndl, T. Reinthaler, 2016: Connectivity between surface and deep waters determines prokaryotic diversity in the North Atlantic Deep Water. *Environ. Microbiol.*, 18: 2052-2063; DOI: 10.1111/1462-2920.13237
- 205) Bayer, B., J. Vojvoda, P. Offre, R.J.E. Alves, N. Elisabeth, J.A. Garcia, J.-M. Volland, A. Srivastava, C. Schleper, G.J. Herndl, 2016: Physiological and genomic characterization of two novel marine thaumarchaeal strains indicates niche differentiation. *The ISME J.*, 10: 1051-1063 doi: 10.1038/ismej.2015.200
- 204) Frade, P.R., V. Schwaninger, B. Glasl, E. Sintes, R.W. Hill, R. Simó, G.J. Herndl, 2016: Coral dimethylsulfoniopropionate: responses to light and stress, and interrelations with bacterial assemblages in surface mucus. *Environ. Chem.*, 13: 252-265, <http://dx.doi.org/10.1071/EN15023>
- 203) De Corte, D., E. Sintes, T. Yokokawa, I. Lekunberri, G.J. Herndl, 2016: Large-scale distribution of microbial and viral populations in the South Atlantic Ocean. *Environ. Microbiol. Rep.*, 8: 305-315; doi:10.1111/1758-2229.12381
- 202) Bohdansky, A.B., M.A. Clouse, G.J. Herndl, 2016: Dragon kings of the deep ocean: marine particles deviate markedly from the common number – size spectrum. *Scientific Reports*, 6:22633, doi: 10.1038/srep22633
- 201) Sintes, E., D. de Corte, G.J. Herndl, 2016: Geographic distribution of archaeal ammonia oxidizing ecotypes in the Atlantic Ocean. *Frontiers Microbiol.*, 7:77. doi: 10.3389/fmicb.2016.00077

- 200) Frade, P.R., K. Roll, K. Bergauer, G.J. Herndl, 2016: Archaeal and bacterial communities associated with the surface mucus of Caribbean corals differ in their degree of host specificity and community turnover over reefs. *PLoS One*, 11: e0144702. doi:10.1371/journal.pone.0144702
- 199) Arrieta, J.M., E. Mayol, C.M. Duarte, R.L. Hansman, G.J. Herndl, T. Dittmar, 2015: Response to Comment on “Dilution limits dissolved organic carbon utilization in the deep ocean”. *Science*, 350 (Issue 6267): NIL_65-NIL_66
- 198) Hansman, R.L., T. Dittmar, G.J. Herndl, 2015: Conservation of dissolved organic matter molecular composition during mixing of deep water masses of the northeast Atlantic Ocean. *Mar. Chem.*, 177: 288-297
- 197) Sintes, E., D. De Corte, N. Ouillon, G.J. Herndl, 2015: Macroecological patterns of archaeal ammonia oxidizers in the Atlantic Ocean. *Mol. Ecol.*, 24: 4931-4942, DOI: 10.1111/mec.13365
- 196) Malits, A., R. Cattaneo, E. Sintes, J.M. Gasol, G.J. Herndl, M.G. Weinbauer, 2015: Potential impacts of black carbon on the marine microbial community. *Aquat. Microb. Ecol.*, 75: 27-42
- 195) Arrieta, J.M., E. Mayol, C.M. Duarte, R. Hansman, G.J. Herndl, T. Dittmar, 2015: Dilution limits dissolved organic carbon utilization in the deep ocean. *Science*, 348: 331-333
- 194) Lønborg, C., T. Yokokawa, G.J. Herndl, X.A. Álvarez-Salgada, 2015: Production and degradation of fluorescent dissolved organic matter in surface waters of the eastern North Atlantic Ocean. *Deep Sea Res Pt 1*, 96: 28-37
- 193) Vojvoda, J., D. Lamy, E. Sintes, J.A. Garcia, V. Turk, G.J. Herndl, 2014: Seasonal variation of marine snow-associated and ambient water prokaryotic communities in the northern Adriatic Sea. *Aquat. Microb. Ecol.*, 73: 211-224
- 192) Mayol, E., M.A. Jimenez, G.J. Herndl, C.M. Duarte, J.M. Arrieta, 2014: Resolving the abundance and air-sea fluxes of airborne microorganisms in the North Atlantic Ocean. *Frontiers in Microbiology*, 5, Article 557
- 191) Winter, C., J.A.L. Garcia, M.G. Weinbauer, M.S. DuBow, G.J. Herndl, 2014: Comparison of deep-water viromes from the Atlantic Ocean and the Mediterranean Sea. *PLoS ONE*, 9: e 100600
- 190) De Corte, D., I. Lekunberri, J.A. Garcia, E. Sintes, S. Gonzales, G.J. Herndl, 2014: Linkage between copepods and bacteria in the North Atlantic. *Aquat. Microb. Ecol.*, 72: 215-225

- 189) Muck, S., T. Griessler, N. Köstner, A. Klimiuk, C. Winter, G.J. Herndl, 2014: Fracture Zones in the Mid Atlantic Ridge lead to alterations in prokaryotic and viral parameters in deep-water masses. *Frontiers Microbiol.*, 5: Article 264
- 188) Zhang, Y., Z. Zhao, M. Dai, N. Jiao, G.J. Herndl, 2014: Drivers shaping the diversity and biogeography of total and active bacterial communities in the South China Sea. *Mol. Ecol.* 23: 2260-2274
- 187) Reinthaler, T., X.A. Alvarez-Salgado, M. Alvarez Rodriguez, H.M. van Aken, G.J. Herndl, 2013: Impact of water mass mixing on the biogeochemistry and microbiology of the Northeast Atlantic Deep Water. *Global Biogeochem. Cycles*, 27: 1151-1162
- 186) Assmy, P., V. Smetacek, M. Montresor, C. Klaas, J. Henjes, V.H. Strass, J.M. Arrieta, U. Bathmann, G.M. Berg, E. Breitbarth, B. Cisewski, L. Friedrichs, N. Fuchs, G.J. Herndl, S. Jansen, S. Krägersky, M. Latasa, I. Peeken, R. Röttgers, R. Scharek, S.E. Schüller, S. Steigenberger, A. Webb, D. Wolf-Gladrow, 2013: Thick-shelled, grazer-protected diatoms decouple ocean carbon and silicon cycles in the iron-limited Antarctic Circumpolar Current. *Proc. Natl. Acad. Sci. USA*, 110: 20633-20638
- 185) Calleja, M.L.L., C.M. Duarte, M. Alvarez, R. Vaquer-Sunyer, S. Agusti, G.J. Herndl, 2013: Prevalence of strong vertical CO₂ and O₂ variability in the top meters of the ocean. *Global Biogeochem. Cycles*, 27: 941-949
- 184) Lekunberri, I., E. Sintes, D. De Corte, T. Yokokawa, G.J. Herndl, 2013: Spatial patterns of bacterial and archaeal communities along the Romanche Fracture Zone (tropical Atlantic). *FEMS Microb. Ecol.*, 85: 537-552
- 183) Herndl, G.J., T. Reinthaler, 2013: Microbial control of the dark end of the biological pump. *Nature Geoscience*, 6: 718-724
- 182) Morgan-Smith, D., M.A. Clouse, G.J. Herndl, A.B. Bochdansky, 2013: Diversity and distribution of microbial eukaryotes in the deep tropical and subtropical North Atlantic. *Deep-Sea Res. I*, 78: 58-69
- 181) Bergauer, K., E. Sintes, J. v. Bleijswijk, H. Witte, T. Reinthaler, G.J. Herndl, 2013: Abundance and distribution of archaeal acetyl-CoA/propionyl-CoA carboxylase genes indicative for putatively chemoautotrophic Archaea in the tropical Atlantic's interior. *FEMS Microb. Ecol.*, 84: 461-473
- 180) Baltar, F., T. Reinthaler, G.J. Herndl, J. Pinhassi, 2013: Major effect of hydrogen peroxide on prokaryotic carbon processing in the epi-, meso-, and

- bathypelagic Northeast Atlantic. PLoS ONE,
doi:10.1371/journal.pone.0061051
- 179) De Corte, D., E. Sintes, T. Yokokawa, G.J. Herndl, 2013: Comparison between MICRO-CARD-FISH and 16SrRNA gene clone libraries to assess the active versus total bacterial community in the coastal Arctic. Environ. Microbiol. Reports, 5: 272-281
- 178) Sintes, E., K. Bergauer, D. De Corte, T. Yokokawa, G.J. Herndl, 2013: Archaeal *amoA* gene diversity points to distinct biogeography of ammonia-oxidizing *Crenarchaeota* in the ocean. Environ. Microbiol., 15: 1647-1658
- 177) Baltar, F., J. Aristegui, J.M. Gasol, T. Yokokawa, G.J. Herndl, 2013: Bacterial *versus* archaeal origin of extracellular enzymatic activity in the northeast Atlantic deep waters. Microb. Ecol., 65: 277-288.
- 176) Bochdansky, A.B., M.H. Jericho, G.J. Herndl, 2013: Development and deployment of a point-source digital inline holographic microscope for the study of plankton and particles to a depth of 6000 m. Limnol. Oceanogr.:Methods, 11: 28-40
- 175) Sintes, E., H. Witte, K. Stoderegger, P. Steiner, G.J. Herndl, 2013: Temporal dynamics in the free-living bacterial community composition in the coastal North Sea. FEMS Microb. Ecol., 83: 413-424
- 174) Ruiz-Gonzalez, C., M. Gali, E. Sintes, G.J. Herndl, J.M. Gasol, R. Simó, 2012: Sunlight effects on the osmoheterotrophic uptake of DMSP-sulfur and leucine by polar phytoplankton. PLoS One, e45545
- 173) De Corte, D., E. Sintes, T. Yokokawa, T. Reinthaler, G.J. Herndl, 2012: Links between viruses and prokaryotes throughout the water column along a North Atlantic latitudinal transect. The ISME J., 6: 1566-1577
- 172) Smetacek, V., C. Klaas, V.H. Strass, P. Assmy, M. Montresor, B. Cisewski, N. Savoye, A. Webb, F. d'Ovidio, J.M. Arrieta, U. Bathmann, R. Bellerby, G.M. Berg, P. Croot, F. d'Ovidio, S. Gonzalez, J. Henjes, G.J. Herndl, L.J. Hoffmann, H. Leach, M. Losch, M.M. Mills, C. Neill, I. Peeken, R. Röttgers, O. Sachs, E. Sauter, M.M. Schmidt, J. Schwarz, A. Terbrüggen, D. Wolf-Gladrow, 2012: Deep carbon export from a Southern Ocean iron-fertilized diatom bloom. Nature, 487: 313-319
- 171) Yokokawa, T., E. Sintes, D. De Corte, K. Olbrich, G.J. Herndl, 2012: Differentiating leucine incorporation of *Archaea* and *Bacteria* throughout the

- water column of the eastern Atlantic using metabolic inhibitors. *Aquat. Microb. Ecol.*, 66: 247-256
- 170) Thomas, H., S.E. Craig, B.J.W. Greenan, W. Burt, G.J. Herndl, S. Higginson, L. Salt, E.H. Shadwick, J. Urrego-Blanco, 2012: Direct observations of diel biological CO₂ fixation on the Scotian Shelf, northwestern Atlantic Ocean. *Biogeosciences*, 9: 2301-2309
- 169) Baltar, F., J. Aristegui, J.M. Gasol, G.J. Herndl, 2012: Microbial functioning and community structure variability in meso- and epipelagic waters of the subtropical Northeast Atlantic. *Appl. Environ. Microbiol.*, 78: 3309-3316
- 168) Llabres, M., S. Agusti, G.J. Herndl, 2011: Diel in situ picophytoplankton cell death cycles coupled with cell division. *J. Phycol.* 47: 1247-1257
- 167) Morgan-Smith, D., G.J. Herndl, H.M. van Aken, A.B. Bochdansky, 2011: Abundance of eukaryotic microbes in the deep subtropical North Atlantic. *Aquat. Microb. Ecol.*, 65: 103-115
- 166) Swan, B.K., M. Martinez-Garcia, C.M. Preston, A. Sczyrba, T. Woyke, D. Lamy, T. Reinthaler, N.J. Poulton, E.D.P. Masland, M.Lluesma Gomez, M.E. Sieracki, E.F. DeLong, G.J. Herndl, R. Stepanauskas, 2011: Potential for chemolithoautotrophy among ubiquitous bacteria lineages in the dark ocean. *Science*, 333: 1296-1300
- 165) De Corte, D., E. Sintes, T. Yokokawa, G.J. Herndl, 2011: Changes in viral and bacterial communities during the ice-melting season in the coastal Arctic (Kongsfjorden, Ny-Ålesund). *Environ. Microbiol.*, 13: 1827-1841
- 164) Jiao, N.Z., G.J. Herndl, D.A. Hansell, R. Benner, G. Kattner, S.W. Wilhelm, D.L. Kirchman, M.G. Weinbauer, T.W. Luo, F. Chen, F. Azam, 2011: The microbial carbon pump and the oceanic recalcitrant dissolved organic matter pool. *Nat. Rev. Microbiol.*, 9: doi:10.1038/nrmicro2386-c5
- 163) Varela, M.M., H.M. van Aken, E. Sintes, T. Reinthaler, G.J. Herndl, 2011: Contribution of *Crenarchaeota* and *Bacteria* to autotrophy in the North Atlantic's interior. *Environ. Microbiol.*, 13: 1524-1533
- 162) Muia, A.W., G. Bretschko, G.J. Herndl, 2011: An overview of the structure and function of microbial biofilms, with special emphasis on heterotrophic aquatic microbial communities. *African J. Aquat. Sci.*, 36: 1-10

- 161) Agogu , H., D. Lamy, P.R. Neal, M.L. Sogin, G.J. Herndl, 2011: Water-mass specificity of bacterial communities in the North Atlantic revealed by massively parallel tag sequencing. *Mol. Ecol.*, 20: 258-274
- 160) Labrenz, M., E. Sintes, F. Toetzke, A. Zumsteg, M. Seidler, G.J. Herndl, M. Seidler, K. J rgens, 2010: Relevance of a crenarchaeal subcluster related to *Candidatus Nitrosopumilus maritimus* to ammonia oxidation in the suboxic zone of the central Baltic Sea. *The ISME J.*, 4: 1496-1508
- 159) De Corte, D., E. Sintes, C. Winter, T. Yokokawa, T. Reinthaler, G.J. Herndl, 2010: Links between viral and prokaryotic communities throughout the water column of the tropical Atlantic Ocean. *The ISME J.*, 4: 1431-1442
- 158) Jiao, N., G.J. Herndl, D.A. Hansell, R. Benner, G. Kattner, S.W. Wilhelm, D.L. Kirchman, M.G. Weinbauer, T. Luo, F. Chen, F. Azam, 2010: Microbial production of recalcitrant dissolved organic matter: long-term carbon storage in the global ocean. *Nature Rev. Microbiol.*, 8: 593-599
- 157) Baltar, F., J. Aristegui, J.M. Gasol, I. Lekunberri, G.J. Herndl, 2010: Mesoscale eddies: hotspots of prokaryotic activity and differential community structure in the ocean. *The ISME J.*, 4: 975-988
- 156) Baltar, F., J. Aristegui, J.M. Gasol, G.J. Herndl, 2010: Prokaryotic carbon utilization in the dark ocean: growth efficiency, leucine-to-carbon conversion factors, and their relation. *Aquat. Microb. Ecol.*, 60: 227-232
- 155) Meador, T.B., A. Gogou, G. Spyres, G.J. Herndl, E. Krasakopoulou, S. Psarra, T. Yokokawa, D. De Corte, V. Zervakis, D.J. Repeta, 2010: Correlations between dissolved organic matter chemical composition, the prokaryotic community, and biogeochemical cycles in the Eastern Mediterranean Sea. *Deep Sea Res. II*, 57: 1460-1477
- 154) Nagata, T., C. Tamburini, J. Aristegui, F. Baltar, A. Bochdansky, S. Fonda-Umani, H. Fukuda, A. Gogou, D.A. Hansell, R.L. Hansman, G.J. Herndl, C. Panagiotopoulos, T. Reinthaler, R. Sohrin, P. Verdugo, N. Yamada, Y. Yamashita, T. Yokokawa, D.H. Bartlett, 2010: Emerging concepts on microbial processes in the bathypelagic ocean – ecology, biogeochemistry and genomics. *Deep Sea Res. II* 57: 1519-1536
- 153) Reinthaler, T., H.M. van Aken, G.J. Herndl, 2010: Major contribution of autotrophy to microbial carbon cycling in the deep North Atlantic's interior. *Deep Sea Res. II*, 57: 1572-1580

- 152) Sintes, E., K. Stoderegger, V. Parada, G.J. Herndl, 2010: Seasonal dynamics dissolved organic matter and microbial activity in the coastal North Sea. *Aquat. Microb. Ecol.*, 60: 85-95
- 151) Baltar, F., J. Aristegui, E. Sintes, J.M. Gasol, T. Reinthaler, G.J. Herndl, 2010: Significance of non-sinking particulate organic carbon and dark CO₂ fixation to heterotrophic carbon demand in the mesopelagic northeast Atlantic. *Geophys. Res. Lett.*, 37: L09602, doi:10.1029/2010GL043105
- 150) Bohdansky, A.B., H.M. van Aken, G.J. Herndl, 2010: Role of macroscopic particles in deep-sea oxygen consumption. *Proc. Natl. Acad. Sci. USA*, 107: 8287-8291
- 149) Yokokawa, T., D. De Corte, E. Sintes, G.J. Herndl, 2010: Spatial patterns of bacterial abundance, activity and community composition in relation to water masses in the eastern Mediterranean Sea. *Aquat. Microb. Ecol.*, 59: 185-195
- 148) Llabres, M., S. Agusti, P. Alsonso-Laita, G.J. Herndl, 2010: *Synechococcus* and *Prochlorococcus* cell death induced by UV radiation and the penetration of lethal UVR in the Mediterranean Sea. *Mar. Ecol. Prog. Ser.*, 399: 27-37
- 147) Baltar, F., J. Aristegui, J.M. Gasol, E. Sintes, H.M. van Aken, G.J. Herndl, 2010: High dissolved extracellular enzymatic activity in the deep central Atlantic Ocean. *Aquat. Microb. Ecol.*, 58: 287-302
- 146) Baltar, F., J. Aristegui, M.F. Montero, M. Espino, J.M. Gasol, G.J. Herndl, 2009: Mesoscale variability modulates seasonal changes in the trophic structure of nano- and picoplankton communities across the NW Africa-Canary Islands transition zone. *Prog. Oceanogr.* 83: 180-188
- 145) Amaro, T., H. Witte, G.J. Herndl, M.R. Cunha, D.S.M. Billett, 2009: Deep-sea bacterial communities in sediments and guts of deposit-feeding holothurians in Portuguese canyons (NE Atlantic). *Deep Sea Res. I*, 56: 1834-1843
- 144) Baltar, F., J. Aristegui, E. Sintes, H.M. van Aken, J.M. Gasol, G.J. Herndl, 2009: Prokaryotic extracellular enzymatic activity in relation to biomass production and respiration in the meso- and bathypelagic waters of the (sub)tropical Atlantic. *Environ. Microbiol.*, 11: 1998-2014
- 143) Zhang, Y., E. Sintes, J. Chen, Y. Zhang, M. Dai, N. Jiao, G.J. Herndl, 2009: Role of mesoscale cyclonic eddies in the distribution and activity of *Archaea* and *Bacteria* in the South China Sea. *Aquat. Microb. Ecol.*, 56: 65-79

- 142) Bonilla-Findji, O., G.J. Herndl, J.-P. Gattuso, M.G. Weinbauer, 2009: Viral and flagellate control of prokaryotic production and community structure in offshore Mediterranean waters. *Appl. Environ. Microbiol.*, 75: 4801-4812
- 141) Aristegui, J., J.M. Gasol, C.M. Duarte, G.J. Herndl, 2009: Microbial oceanography of the dark ocean's pelagic realm. *Limnol. Oceanogr.* 54: 1501-1529
- 140) Calleja, M.Ll., C.M. Duarte, Y. Prairie, S. Agusti, G.J. Herndl, 2009: Evidence for surface organic matter modulation of air-sea CO₂ gas exchange. *Biogeosciences*, 6: 1105-1114
- 139) Wilhartitz, I., A.K.T. Kirschner, H. Stadler, G.J. Herndl, M. Dietzel, C. Latal, R.L. Mach, A.H. Farnleitner, 2009: Heterotrophic prokaryotic production in ultraoligotrophic alpine karst aquifers and ecological implications. *FEMS Microb. Ecol.*, 68: 287-299
- 138) Herfort, L., J.-H. Kim, M.J.L. Coolen, B. Abbas, S. Schouten, G.J. Herndl, J.S. Sinninghe Damsté, 2009: Diversity of *Archaea* and detection of crenarchaeotal *amoA* genes in the rivers Rhine and Têt. *Aquat. Microb. Ecol.*, 55: 189-201
- 137) Weinbauer, M.G., J.M. Arrieta, C. Griebler, G.J. Herndl, 2009: Enhanced viral production and infection of bacterioplankton during an iron-induced phytoplankton bloom in the Southern Ocean. *Limnol. Oceanogr.* 54: 774-784
- 136) Baltar, F., J. Aristegui, J.M. Gasol, E. Sintes, G.J. Herndl, 2009: Evidence for dependence of prokaryotic metabolism on suspended particulate organic matter in the dark waters of the subtropical North Atlantic. *Limnol. Oceanogr.*, 54: 182-193
- 135) De Corte, D., T. Yokokawa, M.M. Varela, H. Agogué, G.J. Herndl, 2009: Spatial distribution of *Bacteria* and *Archaea* and *amoA* gene copy numbers throughout the water column of the eastern Mediterranean Sea. *The ISME J.*, 3: 147-158
- 134) Grote, J., G. Jost, M. Labrenz, G.J. Herndl, K. Jürgens, 2008: *Epsilonproteobacteria* represent the major portion of chemoautotrophic bacteria in sulfidic waters of pelagic redoxclines of the Baltic and Black Seas. *Appl. Environ. Microbiol.* 74: 7546-7551

- 133) Agogu , H., M. Brink, J. Dinasquet, G.J. Herndl, 2008: Major gradients in putatively nitrifying and non-nitrifying Archaea in the deep North Atlantic. *Nature*, 456: 788-791
- 132) Herndl, G.J., H. Agogu , F. Baltar, T. Reinthaler, E. Sintes, M.M. Varela, 2008: Regulation of aquatic microbial processes: the ‘microbial loop of the sunlit surface waters and the dark ocean dissected. *Aquat. Microb. Ecol.*, 53: 59-68
- 131) Gasol, J.M., J. Pinhassi, L. Alonso-S ez, H. Ducklow, G.J. Herndl, M. Koblizek, M. Labrenz, Y. Luo, X.A.G. Moran, T. Reinthaler, M. Simon, 2008: Towards a better understanding of the microbial carbon flux in the sea. *Aquat. Microb. Ecol.*, 53: 21-38
- 130) Parada, V., A.-C. Baudoux, E. Sintes, M.G. Weinbauer, G.J. Herndl, 2008: Dynamics and diversity of newly produced virioplankton in the North Sea. *ISME J.*, 2: 924-936
- 129) Winter, C., M.M. Moeseneder, G.J. Herndl, M.G. Weinbauer, 2008: Relationship of geographic distance, depth, temperature, and viruses with prokaryotic communities in the eastern tropical Atlantic Ocean. *Microb. Ecol.*, 56: 383-389
- 128) Varela, M.M., H.M. van Aken, G.J. Herndl, 2008: Abundance and activity of *Chloroflexi*-type SAR202 bacterioplankton in the meso- and bathypelagic waters of the (sub)tropical Atlantic. *Environ. Microbiol.*, 10: 1903-1911
- 127) Reinthaler, T., E. Sintes, G.J. Herndl, 2008: Dissolved organic matter and bacterial production and respiration in the sea-surface microlayer of the open Atlantic and the western Mediterranean Sea. *Limnol. Oceanogr.*, 53: 122-136
- 126) Varela, M.M., H.M. van Aken, E. Sintes, G.J. Herndl, 2008: Latitudinal trends of *Crenarchaeota* and *Bacteria* in the meso- and bathypelagic water masses of the North Atlantic. *Environ. Microbiol.*, 10: 110-124
- 125) Baltar, F., J. Aristegui, J.M. Gasol, S. Hernandez-Leon, G.J. Herndl, 2007: Strong coast – ocean and surface – depth gradients in prokaryotic assemblage structure and activity in a coastal transition zone region. *Aquat. Microb. Ecol.*, 50: 63-74
- 124) Herfort, L., S. Schouten, B. Abbas, M.J.W. Veldhuis, M.J.L. Coolen, C. Wuchter, J.P. Boon, G.J. Herndl, J.S. Sinninghe Damst , 2007: Variations in spatial and temporal distribution of Archaea in the North Sea in relation to environmental variables. *FEMS Microb. Ecol.*, 62: 242-257

- 123) Stoica, E., G.J. Herndl, 2007: Bacterioplankton community composition in nearshore waters of the NW Black Sea coast during consecutive diatom and coccolithophorid blooms. *Aquat. Sci.*, 69: 413-418
- 122) Wilhartitz, I., R. Mach, E. Teira, T. Reinthaler, G.J. Herndl, A. Farnleitner, 2007: Prokaryotic community analysis with CARD-FISH in comparison to FISH in ultra-oligotrophic ground- and drinking water. *J. Appl. Microbiol.*, 103: 871-881
- 121) Stoica, E., G.J. Herndl, 2007: Contribution of *Crenarchaeota* and *Euryarchaeota* to the prokaryotic plankton in the coastal northwestern Black Sea. *J. Plankton Res.*, 29: 699-706
- 120) Parada, V., E. Sintes, H.M. van Aken, M.G. Weinbauer, G.J. Herndl, 2007: Viral abundance, decay and diversity in the meso- and bathypelagic waters of the North Atlantic. *Appl. Environ. Microbiol.*, 73: 4429-4438
- 119) Arrieta, J.M., M.G. Weinbauer, G.J. Herndl, 2007: Response to "Interpreting the results of oceanic mesoscale enrichment experiments: caveats and lessons from limnology and coastal ecology" by M.S. Hale and R.B. Rivkin. *Limnol. Oceanogr.*, 52: 916-918
- 118) Alderkamp, A.-C., E. Sintes, G.J. Herndl, 2006: Abundance and activity of major groups of prokaryotic plankton in the coastal North Sea during spring and summer. *Aquat. Microb. Ecol.*, 45: 237-246
- 117) Reinthaler, T., K. Bakker, R. Manuels, J. v. Ooijen, G.J. Herndl, 2006: Fully automated spectrophotometric approach to determine oxygen concentrations in seawater via continuous-flow analysis. *Limnol. Oceanogr.:Methods*, 4: 358-366
- 116) Sintes, E., G.J. Herndl, 2006: Quantifying substrate uptake of individual cells of marine bacterioplankton by catalyzed reporter deposition fluorescence in situ hybridization combined with microautoradiography. *Appl. Environ. Microbiol.*, 72: 7022-7028
- 115) Teira, E., P. Lebaron, H. v. Aken, G.J. Herndl, 2006: Distribution and activity of Bacteria and Archaea in the deep water masses of the North Atlantic. *Limnol. Oceanogr.*, 51: 2131-2144
- 114) Wuchter, C., B. Abbas, M.J.L. Coolen, L. Herfort, J. van Bleijswijk, P. Timmers, M. Strous, E. Teira, G.J. Herndl, J.J. Middelburg, S. Schouten, J.S.

- Sinninghe Damsté, 2006: Archaeal nitrification in the ocean. *Proc. Natl. Acad. Sci. USA*, 103: 12317-12322
- 113) Sogin, M.L., H.G. Morrison, J.A. Huber, D.M. Welch, S.M. Huse, J.M. Arrieta, G.J. Herndl, 2006: Microbial diversity in the deep sea and the under-explored "rare biosphere". *Proc. Natl. Acad. Sci. USA*, 103: 12115-12120
- 112) Reinthaler, T., H. van Aken, C. Veth, P. leB Williams, J. Aristegui, C. Robinson, P. Lebaron, G.J. Herndl, 2006: Prokaryotic respiration and production in the meso- and bathypelagic realm of the eastern and western North Atlantic basin. *Limnol. Oceanogr.*, 51: 1262-1273
- 111) Parada, V., G.J. Herndl, M.G. Weinbauer, 2006: Viral burst size of heterotrophic prokaryotes in aquatic systems. *J. Mar. Biol. Ass. UK*, 86: 613-621
- 110) Joux, F., H. Agogue, I. Obernosterer, C. Dupuy, T. Reinthaler, G.J. Herndl, P. Lebaron, 2006: Microbial community structure in the sea surface microlayer at two contrasting sites in the Northwestern Mediterranean Sea. *Aquat. Microb. Ecol.*, 42: 91-104
- 109) Teira, E., H. v. Aken, C. Veth, G.J. Herndl, 2006: Archaeal uptake of enantiomeric amino acids in the meso- and bathypelagic waters of the North Atlantic. *Limnol. Oceanogr.*, 51: 60-69
- 108) Dachs, J., M.L. Calleja, C.M. Duarte, S. de Vento, B. Turpin, A. Polidori, G.J. Herndl, S. Agusti, 2005: High atmosphere-ocean exchange of organic carbon in the NE subtropical Atlantic. *Geophys. Res. Lett.*, 32, L21807
- 107) Agogue, H., E. Casamayor, M. Bourrain, I. Obernosterer, F. Joux, G.J. Herndl, P. Lebaron, 2005: A survey on bacteria inhabiting the sea surface microlayer of coastal ecosystems. *FEMS Microb. Ecol.*, 54: 269-280
- 106) Stoderegger, K.E., G.J. Herndl, 2005: Dynamics in bacterial surface properties of a natural bacterial community in the coastal North Sea during a spring phytoplankton bloom. *FEMS Microb. Ecol.*, 53: 285-294
- 105) Farnleitner, A.H., I. Wilhartitz, G. Ryzinska, A.K.T. Kirschner, H. Stadler, M.M. Burtscher, R. Hornek, U. Szewzyk, G.J. Herndl, R.L. Mach, 2005: Bacterial dynamics in spring water of alpine karst aquifers indicates the presence of stable autochthonous microbial endokarst communities. *Environ. Microbiol.*, 7: 1248-1259
- 104) Obernosterer, I., P. Catala, T. Reinthaler, G.J. Herndl, P. Lebaron, 2005: Enhanced heterotrophic activity in the surface microlayer of the

- Mediterranean Sea. *Aquat. Microb. Ecol.*, 39: 293-302
- 103) Pirker, H., C. Pausz, K.E. Stoderegger, G.J. Herndl, 2005: Simultaneous measurement of metabolic activity and membrane integrity in marine bacterioplankton determined by confocal laser-scanning microscopy. *Aquat. Microb. Ecol.*, 39: 225-233
- 102) Winter, C., A. Smit, T. Szöke-Dénes, G.J. Herndl, M.G. Weinbauer, 2005: Modeling viral impact on bacterioplankton in the North Sea using artificial neural networks. *Environ. Microbiol.*, 7: 881-893
- 101) Herndl, G.J., T. Reinthaler, E. Teira, H. van Aken, C. Veth, A. Pernthaler, J. Pernthaler, 2005: Contribution of *Archaea* to total prokaryotic production in the deep Atlantic Ocean. *Appl. Environ. Microbiol.*, 71: 2303-2309
- 100) Reinthaler, T., C. Winter, G.J. Herndl, 2005: Relation between bacterioplankton richness, respiration, and production in the southern North Sea. *Appl. Environ. Microbiol.*, 71: 2260-2266
- 99) Reinthaler, T., G.J. Herndl, 2005: Seasonal dynamics of bacterial growth efficiencies in relation to phytoplankton in the Southern North Sea. *Aquat. Microb. Ecol.*, 39: 7-16
- 98) Winter, C., A. Smit, G.J. Herndl, M.G. Weinbauer, 2005: Linking prokaryotic richness with viral abundance and prokaryotic activity. *Limnol. Oceanogr.*, 50: 968-977
- 97) Moeseneder, M.M., J.M. Arrieta, G.J. Herndl, 2005: A comparison of DNA- and RNA-based clone libraries from the same marine bacterioplankton community. *FEMS Microb. Ecol.*, 51: 341-352
- 96) Besemer, K., M.M. Moeseneder, J.M. Arrieta, G.J. Herndl, P. Peduzzi, 2005: Complexity of bacterial communities in a river-floodplain system (Danube, Austria). *Appl. Environ. Microbiol.*, 71: 609-620
- 95) Kramer, G.D., C. Pausz, G.J. Herndl, 2005: Elemental composition of dissolved organic matter and bacterioplankton production in the Faroe-Shetland Channel of the North Atlantic. *Deep Sea Res. I*, 52: 85-97
- 94) Kramer, G.D., G.J. Herndl, 2004: Photo- and bioreactivity of chromophoric dissolved organic matter produced by marine bacterioplankton. *Aquat. Microb. Ecol.*, 36: 239-246
- 93) Agogue, H., E. Casamayor, F. Joux, I. Obernosterer, C. Dupuy, F. Lantoiné, P. Catala, M.G. Weinbauer, T. Reinthaler, G.J. Herndl, P. Lebaron, 2004:

- Comparison of samplers for the biological characterization of the sea surface microlayer. *Limnol. Oceanogr.: Methods*, 2: 213-225
- 92) Teira, E., T. Reinthaler, A. Pernthaler, J. Pernthaler, G.J. Herndl, 2004: Combining catalyzed reporter deposition-fluorescence in situ hybridization and microautoradiography to detect substrate utilization by Bacteria and Archaea in the deep ocean. *Appl. Environ. Microbiol.*, 70: 4411-4414
- 91) Stoderegger, K.E., G.J. Herndl, 2004: Dynamics in bacterial cell surface charge assessed by fluorescence stains and confocal laser scanning microscopy. *Aquat. Microb. Ecol.*, 36: 29-40
- 90) Winter, C., G.J. Herndl, M.G. Weinbauer, 2004: Diel cycles in viral infection of bacterioplankton in the North Sea. *Aquat. Microb. Ecol.*, 35: 207-216
- 89) Arrieta, J.M., M.G. Weinbauer, C. Lute, G.J. Herndl, 2004: Rapid response of bacterioplankton to iron fertilization in the Southern Ocean. *Limnol. Oceanogr.*, 49: 799-808
- 88) Winter, C., A. Smit, G.J. Herndl, M.G. Weinbauer, 2004: Impact of virioplankton on archaeal and bacterial community richness assessed in seawater batch cultures. *Appl. Environ. Microbiol.*, 70: 804-813
- 87) Muia, W.A., G. Bretschko, G.J. Herndl, 2003: A study of biofilm in a second order tropical stream, Njoro River, Kenya: first results. *Internat. Rev. Hydrobiol.*, 88: 372-384
- 86) Hein, T., C. Baranyi, G.J. Herndl, P. Riedler, W. Wanek, F. Schiemer, 2003: Allochthonous and autochthonous particulate organic matter in floodplains of the River Danube: the importance of hydrological connectivity. *Freshwater Biol.*, 48: 220-232
- 85) Perez, M.T., C. Pausz, G.J. Herndl, 2003: Major shift in bacterioplankton utilization of enantiomeric amino acids between surface waters and the ocean's interior. *Limnol. Oceanogr.*, 48: 755-763
- 84) Slezak, D, G.J. Herndl, 2003: Role of UV-radiation on the cell content and concentration of dimethylsulfoniopropionate in *Emiliana huxleyi* (Strain L). *Mar. Ecol. Prog. Ser.*, 246: 61-71
- 83) Stoderegger, K.E., G.J. Herndl, 2002: Distribution of capsulated bacterioplankton in the North Atlantic and the North Sea. *Microb. Ecol.*, 44: 154-163

- 82) Pausz, C., G.J. Herndl, 2002: Role of nitrogen *versus* phosphorus availability on the effect of UV radiation on bacterioplankton and their recovery from previous UV stress. *Aquat. Microb. Ecol.*, 29: 89-95
- 81) Arrieta, J.M., G.J. Herndl, 2002: Changes in bacterial β -glucosidase diversity during a coastal phytoplankton bloom. *Limnol. Oceanogr.*, 47: 594-599
- 80) Reitner, B., A. Herzig, G.J. Herndl, 2002: Photoreactivity and bacterioplankton availability of aliphatic *versus* aromatic amino acids and a protein. *Aquat. Microb. Ecol.*, 26: 305-311
- 79) Stoderegger, K.E., G.J. Herndl, 2001: Visualization of the exopolysaccharide bacterial capsule and its distribution in oceanic environments. *Aquat. Microb. Ecol.*, 26: 195-199
- 78) Arrieta, J.M., G.J. Herndl, 2001: Assessing the diversity of marine bacterial β -glucosidase by capillary electrophoresis zymography. *Appl. Environ. Microbiol.*, 67: 4896-4900
- 77) Slezak, D., A. Brugger, G.J. Herndl, 2001: Impact of solar radiation on the biological removal of dimethylsulfoniopropionate and dimethylsulfide in marine surface waters. *Aquat. Microb. Ecol.*, 25: 87-97
- 76) Brugger, A., B. Reitner, I. Kolar, N. Querec, G.J. Herndl, 2001: Seasonal and spatial distribution of dissolved and particulate organic carbon and bacteria in a bank of an oligotrophic river, the Enns River, Austria. *Freshwater Biol.*, 46: 997-1016
- 75) Brugger, A., B. Wett, I. Kolar, B. Reitner, G.J. Herndl, 2001: Immobilization and bacterial utilization of dissolved organic carbon entering the riparian zone of the alpine Enns River, Austria. *Aquat. Microb. Ecol.* 24: 129-142
- 74) Obernosterer, I. P. Ruardij, G.J. Herndl, 2001: Spatial and diurnal dynamics of dissolved organic matter (DOM) fluorescence and H₂O₂ and the photochemical oxygen demand of surface water DOM across the subtropical Atlantic Ocean. *Limnol. Oceanogr.*, 46: 632-643
- 73) Obernosterer, I., R. Sempéré, G.J. Herndl, 2001: Ultraviolet radiation induces a reversal of the bioavailability of DOM to marine bacterioplankton. *Aquat. Microb. Ecol.*, 24: 61-68
- 72) Moeseneder, M.M., C. Winter, J.M. Arrieta, G.J. Herndl, 2001: Terminal-restriction fragment length polymorphism (T-RFLP) screening of a marine

- archaeal clone library to determine the different phylotypes. *J. Microbiol. Meth.*, 44: 159-172
- 71) Winter, C., M.M. Moeseneder, G.J. Herndl, 2001: Impact of UV radiation on bacterioplankton community composition. *Appl. Environ. Microbiol.*, 67: 665-672
- 70) Moeseneder, M.M., C. Winter, G.J. Herndl, 2001: Horizontal and vertical complexity of attached and free-living Bacteria of the eastern Mediterranean Sea determined by 16S rDNA and 16S rRNA fingerprints. *Limnol. Oceanogr.*, 46: 95-107
- 69) Obernosterer, I., G.J. Herndl, 2000: Differences in the optical and biological reactivity of humic and non-humic DOC in two contrasting coastal marine environments. *Limnol. Oceanogr.*, 45: 1120-1129
- 68) Kuipers, B., G.J. van Noort, J.H. Vosjan, G.J. Herndl, 2000: Diel periodicity of bacterioplankton in the euphotic zone of the subtropical Atlantic Ocean. *Mar. Ecol. Prog. Ser.*, 201: 13-25
- 67) Panzenböck, M., B. Möbes-Hansen, R. Albert, G.J. Herndl, 2000: Dynamics of phyto- and bacterioplankton in a high Arctic lake on Franz-Joseph-Land archipelago. *Aquat. Microb. Ecol.*, 21: 265-273
- 66) Arrieta, J.M., M.G. Weinbauer, G.J. Herndl, 2000: Interspecific differences in sensitivity to UV radiation and subsequent recovery in selected isolates of marine bacteria. *Appl. Environ. Microbiol.*, 66: 1468-1473
- 65) Obernosterer, I., G. Kraay, E. de Ranitz, G.J. Herndl, 1999: Dynamics of low molecular weight carboxylic acids and carbonyl compounds in the Aegean Sea (Eastern Mediterranean) and the turnover of pyruvate. *Aquat. Microb. Ecol.*, 20: 147-156
- 64) Stoderegger, K.E., G.J. Herndl, 1999: Production of exopolymer particles by marine bacterioplankton under contrasting turbulence conditions. *Mar. Ecol. Prog. Ser.*, 189: 9-16
- 63) Obernosterer, I., B. Reitner, G.J. Herndl, 1999: Contrasting effects of solar radiation on dissolved organic matter and its bioavailability to marine bacterioplankton. *Limnol. Oceanogr.*, 44: 1645-1654
- 62) Reitner, B., A. Herzig, G.J. Herndl, 1999: Dynamics in bacterioplankton production in a shallow, temperate lake (Lake Neusiedl, Austria): evidence for

- dependence on macrophyte production rather than on phytoplankton. *Aquat. Microb. Ecol.*, 19: 245-254
- 61) Moeseneder, M.M., J.M. Arrieta, G. Muyzer, C. Winter, G.J. Herndl, 1999: Optimization of terminal-restriction fragment length polymorphism analysis for complex marine bacterioplankton communities and comparison with denaturing gradient gel electrophoresis. *Appl. Environ. Microbiol.*, 65: 3518-3525
- 60) Pausz, C., G.J. Herndl, 1999: Role of ultraviolet radiation on phytoplankton extracellular release and its subsequent utilization by marine bacterioplankton. *Aquat. Microb. Ecol.*, 18: 85-93
- 59) Unanue, M., B. Ayo, M. Agis, D. Slezak, G.J. Herndl, J. Iriberry, 1999: Ectoenzymatic activity and uptake of monomers in marine bacterioplankton described by a biphasic kinetic model. *Microb. Ecol.*, 37: 36-48
- 58) Stoderegger, K., G.J. Herndl, 1998: Production and release of bacterial capsular material and its subsequent utilization by marine bacterioplankton. *Limnol. Oceanogr.*, 43: 877-884
- 57) Unanue, M.A., I. Azua, J.M. Arrieta, G.J. Herndl, J. Iriberry, 1998: Laboratory made particles as a useful approach to analyse microbial processes in marine macroaggregates. *FEMS Microbiol. Ecol.*, 26: 325-334
- 56) Agis, M. M. Unanue, J. Iriberry, G.J. Herndl, 1998: Bacterial colonization and ectoenzymatic activity in artificial marine snow. Part II: Cleavage and uptake of carbohydrates. *Microb. Ecol.*, 36: 66-74
- 55) Schuster, S., J.M. Arrieta, G.J. Herndl, 1998: Adsorption of dissolved free amino acids on colloidal DOM enhances colloidal DOM utilization but reduces amino acid uptake by orders of magnitude in marine bacterioplankton. *Mar. Ecol. Prog. Ser.*, 166: 99-108
- 54) Brugger, A, D. Slezak, I. Obernosterer, G.J. Herndl, 1998: Photolysis of dimethyl sulfide in the northern Adriatic Sea: Dependence on substrate concentration, irradiance and DOC concentration. *Mar. Chem.*, 59: 321-331
- 53) Rath, J., K.Y. Wu, G.J. Herndl, E.F. DeLong, 1998: High phylogenetic diversity in a marine snow-associated bacterial assemblage. *Aquat. Microb. Ecol.*, 14: 261-269
- 52) Reitner, B., A. Herzig, G.J. Herndl, 1997: Microbial activity under the ice cover of a shallow lake. *Hydrobiologia*, 357: 173-184

- 51) Sommaruga, R., I. Obernosterer, G.J. Herndl, R. Psenner, 1997: Inhibitory effect of solar radiation on thymidine and leucine incorporation by freshwater and marine bacterioplankton. *Appl. Environ. Microbiol.*, 63: 4178-4184
- 50) Kaiser, E., G.J. Herndl, 1997: Rapid recovery of marine bacterioplankton activity after inhibition by UV radiation. *Appl. Environ. Microbiol.*, 63: 4026-4031
- 49) Hoch, B.M., B. Berger, G. Kavka, G.J. Herndl, 1997: Concentration of suspended matter and the bacterioplankton community in the Danube River (in German). *Wasser- und Abfallwirtschaft*, 49: 57-63
- 48) Reitner, B., A. Herzig, G.J. Herndl, 1997: Role of ultraviolet-B radiation on photochemical and microbial oxygen consumption in a humic-rich shallow lake. *Limnol. Oceanogr.*, 42: 950-960
- 47) Heissenberger, A., G.G. Leppard, G.J. Herndl, 1996: Relation between the intracellular integrity and the morphology of the capsular envelope in attached and free-living marine bacteria. *Appl. Environ. Microbiol.*, 62: 4521-4528
- 46) Müller-Niklas, G., G.J. Herndl, 1996: Dynamics of bacterioplankton during a phytoplankton bloom in the high Arctic waters of the Franz-Joseph Land. *Aquat. Microb. Ecol.*, 11: 111-118
- 45) Heissenberger, A., G.G. Leppard, G.J. Herndl, 1996: Ultrastructure of marine snow: II. Microbiological considerations. *Mar. Ecol. Prog. Ser.*, 135: 299-38
- 44) Leppard, G.G., A. Heissenberger, G.J. Herndl, 1996: Ultrastructure of marine snow: I. Transmission electron microscopy methodology. *Mar. Ecol. Prog. Ser.*, 135: 289-298
- 43) Müller-Niklas, G., M. Agis, G.J. Herndl, 1996: Microscale distribution of bacterioplankton in relation to phytoplankton: results from 100-nl samples. *Limnol. Oceanogr.* 41: 1577-1582.
- 42) Berger, B., B. Hoch, G. Kavka, G.J. Herndl, 1996: Bacterial colonization of suspended solids in the Danube River. *Aquat. Microb. Ecol.*, 10: 37-44
- 41) Hoch, B., B. Berger, G. Kavka, G.J. Herndl, 1996: Influence of waste water treatment on the microbial ecology of a large, temperate river system - the River Danube. *Hydrobiologia*, 321: 205-218
- 40) Berger, B., B.M. Hoch, G. Kavka, G.J. Herndl, 1995: The bacterial community of the Danube near Vienna: Microbial-ecological parameters as compared with bacteriological water quality parameters and their influencing factors (in German). *Wasser Abfallwirtschaft*, 47: 282-288

- 39) Berger, B., B. Hoch, G. Kavka, G.J. Herndl, 1995: Bacterial metabolism in the River Danube: parameters influencing bacterial production. *Freshwater Biol.*, 34: 601-616
- 38) Hoch, B., B. Berger, G. Kavka, G.J. Herndl, 1995: Remineralization of organic matter and degradation of the organic fraction of suspended solids in the Danube River. *Aquat. Microb. Ecol.*, 9: 279-288
- 37) Moeseneder, M.M., G.J. Herndl, 1995: Influence of turbulence on bacterial production in the sea. *Limnol. Oceanogr.*, 40: 1466-1473
- 36) Müller-Niklas, G., A. Heissenberger, S. Puskaric, G.J. Herndl, 1995: Ultraviolet-B radiation and bacterial metabolism in coastal waters. *Aquat. Microb. Ecol.*, 9: 111-116
- 35) Schuster, S., G.J. Herndl, 1995: Formation and significance of transparent exopolymeric particles in the northern Adriatic Sea. *Mar. Ecol. Prog. Ser.*, 124: 227-236
- 34) Bohdansky, A.B., S. Puskaric, G.J. Herndl, 1995: Influence of zooplankton grazing on free dissolved enzymes in the sea. *Mar. Ecol. Prog. Ser.*, 121: 53-63
- 33) Obernosterer, I., G.J. Herndl, 1995: Phytoplankton extracellular release and bacterial growth: dependence on the inorganic N:P ratio. *Mar. Ecol. Prog. Ser.*, 116: 247-257
- 32) Heissenberger, A., G.J. Herndl, 1994: Formation of high molecular weight material by free-living marine bacteria. *Mar. Ecol. Prog. Ser.*, 111: 129-135
- 31) Müller-Niklas, G., S. Schuster, E. Kaltenböck, G.J. Herndl, 1994: Organic content and bacterial metabolism in amorphous aggregations of the Northern Adriatic Sea. *Limnol. Oceanogr.*, 39: 58-68
- 30) Rath, H., G.J. Herndl, 1994: Characteristics and diversity of β -D-glucosidase (EC 3.2.1.21) activity in marine snow. *Appl. Environ. Microbiol.*, 60: 807-813
- 29) Slezak, D., S. Puskaric, G.J. Herndl, 1994: Potential role of acrylic acid in bacterioplankton communities in the sea. *Mar. Ecol. Prog. Ser.*, 105: 191-197
- 28) Rath, H., C. Schiller, G.J. Herndl, 1993: Ecto enzymatic activity and bacterial dynamics along a trophic gradient in the Caribbean Sea. *Mar. Ecol. Prog. Ser.*, 102: 89-96
- 27) Herndl, G.J., G. Müller-Niklas, J. Frick, 1993: Major role of ultraviolet-B in controlling bacterial growth in marine surface waters. *Nature*, 361: 717-719

- 26) Herndl, G.J., 1992: Marine snow in the Northern Adriatic Sea: possible causes and consequences for a shallow ecosystem. *Mar. Microbial Food Webs*, 6: 149-172
- 25) Müller-Niklas, G. & G.J. Herndl, 1992: Activity of fecal coliform bacteria measured by 4-methylumbelliferyl-beta-D-glucuronide substrate in the northern Adriatic Sea with special reference to marine snow. *Mar. Ecol. Prog. Ser.*, 89: 305-309
- 24) Karner, M., D. Fuks, G.J. Herndl, 1992: Bacterial activity along a trophic gradient. *Microb. Ecol.*, 24: 243-257
- 23) Bochdansky, A. & G.J. Herndl, 1992: Ecology of amorphous aggregates (marine snow) in the Northern Adriatic Sea: V. Role of fecal pellets in marine snow. *Mar. Ecol. Prog. Ser.*, 89: 297-303
- 22) Kaltenböck, E. & G.J. Herndl, 1992: Ecology of amorphous aggregations (marine snow) in the Northern Adriatic Sea: IV. Dissolved nutrients and the autotrophic component associated with marine snow. *Mar. Ecol. Prog. Ser.*, 87: 147-159
- 21) Bochdansky, A. & G.J. Herndl, 1992: Ecology of amorphous aggregates (marine snow) in the Northern Adriatic Sea: III. Zooplankton interactions with marine snow. *Mar. Ecol. Prog. Ser.*, 87: 135-146
- 20) Peduzzi, P. & G.J. Herndl, 1992: Zooplankton activity fueling the microbial loop: differential growth response of bacteria from oligo- and eutrophic waters. *Limnol. Oceanogr.*, 37: 1087-1092
- 19) Karner, M. & G.J. Herndl, 1992: Extracellular enzymatic activity and secondary production in free-living and marine snow associated bacteria. *Mar. Biol.*, 113: 341-347
- 18) Faganeli, J. & G.J. Herndl, 1991: Dissolved organic matter in the waters of the Gulf of Trieste (Northern Adriatic). *Thal. Jugosl.*, 23: 51-63
- 17) Peduzzi, P. & G.J. Herndl, 1991: Mucus trails in the rocky intertidal: a highly active microenvironment. *Mar. Ecol. Prog. Ser.*, 75: 267-274
- 16) Amon, R.M.W. & G.J. Herndl, 1991: Deposit-feeding and sediment: II. Decomposition of fecal pellets of *Holothuria tubulosa* (Holothuroidea, Echinodermata). *P.S.Z.N.I: Mar. Ecol.*, 12: 175-184
- 15) Amon, R.M.W. & G.J. Herndl, 1991: Deposit-feeding and sediment: I. Interrelationships between *Holothuria tubulosa* (Holothuroidea,

- Echinodermata) and the sediment microbial community. P.S.Z.N.I: Mar. Ecol., 12: 163-174
- 14) Peduzzi, P. & G.J. Herndl, 1991: Decomposition and significance of seagrass leaf litter (*Cymodocea nodosa*) for the microbial food web in coastal waters (Gulf of Trieste, Northern Adriatic Sea). Mar. Ecol. Prog. Ser., 71: 163-174
- 13) Herndl, G.J., 1991: Microbial biomass dynamics along a trophic gradient at the Atlantic Barrier Reef off Belize (Central America). P.S.Z.N.I: Mar. Ecol., 12: 41-51
- 12) Herndl, G.J. & P. Peduzzi, 1989: Potential microbial utilization rates of sublittoral gastropod mucus trails. Limnol. Oceanogr., 34: 780-784
- 11) Herndl, G.J., P. Peduzzi, N. Fanuko, 1989: Benthic community metabolism and microbial dynamics in the Gulf of Trieste (Northern Adriatic Sea). Mar. Ecol. Prog. Ser., 53: 169-178
- 10) Schiller, C. & G.J. Herndl, 1989: Evidence of enhanced microbial activity in the interstitial space of branched corals: possible implications for coral metabolism. Coral Reefs, 7: 179-184
- 9) Herndl, G.J., 1988: Ecology of amorphous aggregations (marine snow) in the Northern Adriatic Sea: II. Microbial density and activity in marine snow and its implication to overall pelagic processes. Mar. Ecol. Prog. Ser., 48: 265-275
- 8) Herndl, G.J. & P. Peduzzi, 1988: Ecology of amorphous aggregations (marine snow) in the Northern Adriatic Sea: I. General considerations. P.S.Z.N.I: Mar. Ecol., 9: 79-90
- 7) Herndl, G.J., J. Faganeli, N. Fanuko, P. Peduzzi, V. Turk, 1987: Role of bacteria in the carbon and nitrogen flow between water-column and sediment in a shallow marine bay (Bay of Piran, Northern Adriatic Sea). P.S.Z.N.I: Mar. Ecol., 8: 221-236
- 6) Herndl, G.J. & V. Malacic, 1987: Impact of the pycnocline layer on bacterioplankton: diel and spatial variations in microbial parameters in the stratified water column of the Gulf of Trieste (Northern Adriatic Sea). Mar. Ecol. Prog. Ser., 38: 295-303
- 5) Peduzzi, P. & G.J. Herndl, 1986: Role of bacteria in decomposition of faecal pellets egested by the epiphyte-grazing gastropod *Gibbula umbilicaris*. Mar. Biol., 92: 417-424

- 4) Herndl, G.J. & B. Velimirov, 1986: Microheterotrophic utilization of mucus released by the Mediterranean coral *Cladocora cespitosa*. *Mar. Biol.*, 90: 363-369
- 3) Herndl, G.J. & B. Velimirov, 1985: Bacteria in the coelenteron of Anthozoa: control of bacterial density by the coelenteric fluid. *J. Exp. Mar. Biol. Ecol.*, 93: 115-130
- 2) Herndl, G.J., B. Velimirov, R.E. Krauss, 1985: Heterotrophic nutrition and control of bacterial density in the coelenteron of the giant sea anemone *Stoichactis giganteum*. *Mar. Ecol. Prog. Ser.*, 22: 101-105
- 1) Herndl, G.J., 1984: Differences in feeding behaviour between *Actinia equina* and *A. bermudensis* (Actiniaria, Coelenterata) with a note on the intraspecific differences in feeding behaviour in *A. equina*. *Zool. Anz.*, 212: 353-361

Invited contributions in Books and Special Volumes:

- 19) Baltar, F., G.J. Herndl, 2022: Microbial inhabitants of the dark ocean. In: *The marine microbiome*. Stal L.J. & M.S. Cretoiu. (eds), Springer, 425-459.
- 18) Weinbauer, M.G., R. Cattaneo, A. Malits, C. Motegi, J.M. Gasol, G.J. Herndl, X. Mari, C. Migon, 2014: Black carbon and microorganisms in aquatic systems. In: *Advances in environmental research*. J.A. Daniels (ed), Nova Science Publishers. pp. 1-37.
- 17) Benner, R., G.J. Herndl, 2011: Bacterially derived dissolved organic matter in the microbial carbon pump. Science booklet 0.1126/science.opms.sb0001
- 16) Amaral-Zettler, L., L.F. Artigas, J. Baross, L. Bharathi, A. Boetius, D. Chandramohan, G.J. Herndl, K. Kogure, P. Neal, C. Pedros-Alio, A. Ramette, S. Schouten, L. Stal, A. Thessen, J. de Leeuw, M. Sogin, 2010: A global census of marine microbes, In: *Life in the World's Oceans: Diversity, Distribution and Abundance*, Blackwell Publishing Ltd., Oxford, (eds), pp. 223-245.
- 15) Carlson, C.A., P.A. Del Giorgio, G.J. Herndl, 2007: Microbes and the dissipation of energy and respiration: from cells to ecosystems. *Oceanography*, 20: 89-100
- 14) Weinbauer, M.G., G.J. Herndl, 2007: Virus and heterotrophic microplankton. *Encyclopedia of life support systems*.

- 13) Obernosterer, I., G.J. Herndl, P. Lebaron, 2006: Bacterial heterotrophic activity in the sea surface microlayer of the coastal Mediterranean Sea. In: Production and fate of dissolved organic matter in the Mediterranean Sea. CIESM workshop Monographs nr. 28, 81-84
- 12) Arrieta, J.M, G.J. Herndl, 2006: Prokaryotic ectoenzyme activity in surface waters of the Mediterranean. In: Production and fate of dissolved organic matter in the Mediterranean Sea. CIESM workshop Monographs nr. 28, 63-66
- 11) Herndl, G.J., M.G. Weinbauer, 2003: Marine microbial food web structure and function. In: Marine Science Frontiers. Wefer, G. F. Lamy, F. Mantoura [Eds]. Springer, Berlin, 265-277
- 10) Herndl, G.J., 2002: Inefficiency and redundancy in ecology? A plea for a non-deterministic view of aquatic food webs at the beginning of the anthropocene. In: The Vienna School of Marine Biology: a tribute to Jörg Ott. M. Bright, P.C. Dworschak, M. Stachowitsch. [Eds.]. Facultas Universitätsverlag, Wien, 101-112
- 9) Herndl, G.J., I. Obernosterer, 2002: UV radiation and pelagic bacteria. In: Ecological Studies. Vol 153. UV-radiation and arctic ecosystems. [Ed] D.O. Hessen, Springer Verlag, Berlin, Heidelberg, 245-259
- 8) Hoppe, H.-G., C. Arnosti, G.J. Herndl, 2002: Ecological significance of bacterial enzymes in the marine environment. In: Enzymes in the environment: activity, ecology, and applications. [Eds] R.G. Burns, R.P. Dick, Marcel Dekker, Inc. New York, 73-108
- 7) Herndl, G.J., M. Moeseneder, J.M. Arrieta, C. Winter, 2000: Heterotrophic bacterioplankton: phylogenetic diversity versus functional stability? In: Microbial loops: integrating microbes into the Mediterranean marine environments. CIESM Workshop Series Nr 11, CIESM Monaco, 31-34
- 6) Herndl, G.J., 2000: Interactions of bacteria and dissolved organic matter at the sea surface microlayer. Role of the sea surface microlayer processes in the biogeochemistry of the Mediterranean Sea. CIESM Workshop Series Nr 9, CIESM, Monaco, 45-46
- 5) Herndl, G.J., 1997: Role of ultraviolet radiation on bacterioplankton activity. In: Effects of Ozone Depletion on Aquatic Ecosystems. [Ed] D.-P. Häder, Academic Press, 143-154

- 4) Herndl, G.J., A. Brugger, S. Hager, E. Kaiser, I. Obernosterer, B. Reitner, D. Slezak, 1997: Role of ultraviolet-B radiation on bacterioplankton and the availability of dissolved organic matter. In: UV-B and biosphere. [Eds.] J. Rozema, W.W.C. Gieskes, S.C. van de Geijn, C. Nolan, H. de Boois. Kluwer, Academic Press. *Plant Ecology* 128: 42-51
- 3) Herndl, G.J., 1996: Ultraviolet-radiation and bacterioplankton (in German). *Biologie in unserer Zeit*. Vol 26: 234-239
- 2) Karentz, D., M.L. Bothwell, R.B. Coffin, A. Hanson, G.J. Herndl, S.S. Kilham, M.P. Lesser, M. Lindell, R.E. Moeller, D.P. Morris, P.J. Neale, R.W. Sanders, C.S. Weiler, R.G. Wetzel, 1994: Impact of UVB Radiation on Pelagic Freshwater Ecosystems: Report of Working Group on Bacteria and Phytoplankton. *Arch. Hydrobiol. Beih.*, 43: 31-69
- 1) Herndl, G.J., E. Kaltenböck, G. Müller-Niklas, 1993: Dialysis bag incubation as a non-radiolabeling technique to estimate bacterial production. In: *Handbook of Methods in Aquatic Microbial Ecology* (P.F. Kemp, B.F. Sherr, E.B. Sherr, J.J. Cole, eds.), Lewis Publishers, New York: 553-556

Ph.D. thesis

Herndl, G.J., 1982: The feeding behavior of *Actinia equina* (Anthozoa) under experimental conditions. Ph.D. thesis, Univ. of Vienna (in German)

Contributions to Proceeding Volumes of Congresses

- 24) Moeseneder, M.M., G.J. Herndl, 2005: Bacterial community composition of free-living *versus* attached bacterioplankton in the water column of the eastern Mediterranean Sea: evidence of major differences in substrate utilization between surface and deep water bacteria. *Comm. int. Mer Medit.*,
- 23) Herndl, G.J., J. M. Arrieta, I. Obernosterer, C. Pausz, 2003: Role of ultraviolet radiation on heterotrophic bacterioplankton and dissolved organic matter processing: new results and implications for marine ecosystems. *Proc. Congress of the European Soc. for Photobiology*. [Ed] D.-P. Häder
- 22) Herndl, G.J., J.M. Arrieta, E. Kaiser, I. Obernosterer, C. Pausz, B. Reitner, 2000: Role of ultraviolet radiation in aquatic systems: interaction between mixing processes, photochemistry and microbial activity. In: *Proc. 8th International Symposium on Microbial Ecology*, Halifax, Canada. p. 209-216

- 21) Herndl, G.J., 1999: Ultraviolet radiation and the transformation of dissolved organic matter by bacterioplankton in the sea. Ecosystems Research Report No 32, The Adriatic Sea, EU/Environment Series, (eds.) T.S. Hopkins, A. Artegiani, G. Cauwet, D. Degobbis, A. Malej, Brussels: 309-318
- 20) Herndl, G.J., J.M. Arrieta, K. Stoderegger, 1999: Interaction between specific hydrological and microbial activity leading to extensive mucilage formation in the northern Adriatic Sea. *Annali dell "Istituto Superio di Sanita"*, 35: 405-409
- 19) Herndl, G.J., J.M. Arrieta, I. Obernosterer, B. Reitner, 1998: Role of ultraviolet radiation in the Mediterranean Sea: interaction between mixing processes, photochemistry and microbial activity.-*Rapp. Comm. int. Mer Medit.*, 35: 24-28
- 18) Iriberry, J., B. Ayo, A. Bianchi, G.J. Herndl, M. Unanue, 1998: Bacterial heterotrophic activity in the Northwestern basin of the Mediterranean Sea. *Proc. MAST Conference, Irakleon*
- 17) Kavka, G.G., B. Berger, B.M. Hoch, G.J. Herndl, 1996: Assessment of microbiological water quality in the Austrian part of the Danube River. *Arch. Hydrobiol. Suppl. Larger Rivers* 113: 79-86.
- 16) Iriberry, J., G.J. Herndl, 1995: Formation and microbial utilization of amorphous aggregates in the sea: ecological significance. *Microbiologia SEM* 11: 309-322
- 15) Herndl, G.J., 1995: Microbial dynamics in marine aggregates. *Proc. Symp. Seasonal dynamics of planktonic ecosystems and sedimentation in coastal Nordic waters*. S. Floderus, A.-S. Heiskanen, M. Olesen, P. Wassmann (Eds.) *NurmiPrint Oy*. pp. 81-105
- 14) Decho, A.W., G.J. Herndl, 1995: Microbial activities and the transformation of organic matter within mucilaginous material. *Proc. Mucilage Workshop, Cosenatico (Italy)*. *Science of the Total Environment* 165: 33-42
- 13) Ott, J.A., G.J. Herndl, 1994: Marine snow, mucus aggregates and bottom anoxias: Consequences for benthic-pelagic coupling. *CIESM Science Series no. 1. Mediterranean Tributary Seas*: 133-147
- 12) Herndl, G.J., A.B. Bochdansky, E. Kaltenböck, G. Müller-Niklas, 1993: Appearance of marine snow and gel-like aggregations in the Northern Adriatic Sea in 1991: a case study. *Proc. of Mediambiente, Palermo, 1992*

- 11) Herndl, G.J., A.B. Bochdansky, E. Kaltenböck, G. Müller-Niklas, 1993: Marine snow in the Northern Adriatic Sea: major role of microbes in the metabolism of marine snow. Proceedings of the XXIII Congress of the Italian Marine Biology Society. OEBALIA, SIBM 1: 1-12
- 10) Herndl, G.J., M. Karner, P. Peduzzi, 1992: Floating mucilage in the Northern Adriatic Sea: the potential of a microbial ecological approach to solve the "mystery". Proc. on the First Symp. on Coastal Marine Eutrophication. Total Sci. Environ. Suppl. 1992: 525-538
- 9) Faganeli, J., J. Pezdic, B. Ogorelec, G.J. Herndl, T. Dolenc, 1991: The role of sedimentary biogeochemistry in the formation of hypoxia in shallow coastal waters (Gulf of Trieste, northern Adriatic). In: Modern and Ancient Continental Shelf Anoxia. (R.V. Tyson & T.H. Pearson, eds.), Geol. Soc. Special Publication No 58: 107-117
- 8) Faganeli, J. & G.J. Herndl, 1991: Behaviour of dissolved organic matter in porewaters of near-shore marine sediments. In: Diversity of Environmental Biogeochemistry (J. Berthelin, ed.), Elsevier, Amsterdam: 157-170
- 7) Peduzzi, P. & G.J. Herndl, 1991: Giant marine amorphous aggregations in the Northern Adriatic Sea. In: Diversity of Environmental Biogeochemistry (J. Berthelin, ed.), Elsevier, Amsterdam: 185-192
- 6) Herndl, G.J., 1990: Marine snow and its effect on the ecosystem of the Northern Adriatic Sea. Proc. Symp. on Northern Adriatic, Graz: C1-C4
- 5) Herndl, G.J., J. Faganeli, N. Fanuko, P. Peduzzi, V. Turk, 1989: Nutrient dynamics between sediment and overlying water in the Bay of Piran (Northern Adriatic Sea). Proc. 21st European Marine Biology Symp., Gdansk: 297-308
- 4) Schiller, C. & G.J. Herndl, 1989: Evidence of nutrient remineralization in the interstitial space of hermatypic corals. Proc. 21st European Marine Biology Symp., Gdansk: 455-462
- 3) Herndl, G.J., 1989: Diel and spatial variations in bacterial density, FDC, and dissolved organic carbon in a stratified water column of the Gulf of Trieste. In: Aspects in marine microbiology (E.B.G. Jones & D. Miller, eds.), Prog. Oceanog. 21: 139-146
- 2) Velimirov, B., G.J. Herndl, G. Kavka, 1986: Biomass distribution and physiological capabilities of bacteria in the water column above a seagrass

system. In: Deuxieme Colloque Int. de Bacteriologie Marine (GERBAM ed.),
IFREMER, Brest: 129-136

- 1) Herndl, G.J. & B. Velimirov, 1986: Role of bacteria in the gastral cavity of
Anthozoa. In: Deuxieme Colloque Int. de Bacteriologie Marine (GERBAM
ed.), IFREMER, Brest: 407-414