Dr. Gabriel Andreas Singer — Scientific Curriculum Vitae

Gabriel Andreas Singer
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Thomson Reuters Researcher ID: C-6285-2012

Present position: Research group leader, Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany (since 10/2013)

Personal: Born 22nd of October 1976, Wiener Neustadt, Austria; Mother: Beatrix Gabriele Auersperg, Father: Dr. med. Hermann Singer

Education: 1982-1987: Volksschule Pernitz (Niederösterreich); 1987-1995: Bundesgymnasium Berndorf (Niederösterreich); July 1995: school-leaving exams (Matura) passed with distinction

1996-2004: Study of Biology/Ecology at the University of Vienna; 2000: School of Biological Sciences, Monash University (Melbourne, Australia), March 2004: MSc in Biology/Ecology, University of Vienna

2004-2009: PhD in Natural Sciences/Ecology, University of Vienna

Languages: German (native), English (fluent), French (basic), Italian (rudimentary)

Academic specialization and research interests:

Study subjects: Limnology, Stream Ecology, Fluvial Biogeochemistry, Dissolved Organic Matter Chemistry, Biostatistics, Invertebrate Ecology

Further training in: Earth Sciences, Environmental Education, Environmental Economics

MSc thesis (completion date March 2004): Impact of a wastewater treatment plant on nutrient- and energy fluxes through the macroinvertebrate food web of a human-altered stream (supervisors: Dr. Johann Waringer, Dr. Tom Battin).

PhD thesis (completion date June 2009): The implications of environmental heterogeneity for microbial biofilms and stream ecosystem functioning (supervisor: Dr. Tom J Battin).

Current research interests: Biodiversity and ecosystem functioning in spatially structured aquatic meta-ecosystems (river networks, lake chains); high-resolution organic carbon characterization and aquatic ecosystem metabolomics; fluvial carbon biogeochemistry; ecological implications of flow regimes including intermittence; environmental statistics; invertebrate ecology

Research & work experience:

2001	Donabaum & Wolfram, Technical Office for Ecology, 1050 Vienna.
2001-2004	Research associate and master student (European project STREAMES, EU 5th Framework program, ref: EVK1-CT-2000-00081), University of Vienna, Austria.
2004	Research assistant (RITRODAT-project), Biological Station Lunz am See, Austria.
2001-2006	Freelance ecologist for various research projects (identification of freshwater specimens, biostatistics, ecomorphological field work) at the Austrian Academy of Sciences and for the Österreichischer Naturschutzbund.
2004-2009	Research assistant and PhD student (Microbial Biofilms, FWF project P16935, PI: Dr. Tom J Battin), University of Vienna, Austria.
2009-2013	Post-doc research associate (FWF START Y420, PI: Dr. Tom J Battin), WasserCluster Lunz, Austria; and post-doc university assistant, University of Vienna, Austria.

Teaching experience:

1999	Assistant instructor, Institute for Botany, University of Vienna
2000-2004	Assistant instructor, Institute of Ecology and Conservation Biology, University of Vienna
2003-2011	Academic lecturer, International Postgraduate Training Course in Limnology (IPGL), Institute of Limnology, Mondsee, Austrian Academy of Sciences
2002-2008	Project-leader and instructor in secondary education, w@lz-WienerLernzentrum (www.walz.at), Oswaldgasse 33, 1120 Wien
2005-2015	Academic lecturer, UNESCO-IHE Institute of Water Education (*www.ihe.nl*), Delft, The Netherlands
2005-2018	Academic lecturer and assistant instructor, Department of Limnology and Microbial Oceanography (former Freshwater Ecology), University of Vienna
2014-2017	Graduate school lecturer, IGB Berlin

Career breaks

10/1995-6/1996	Obligatory military service
2/2014-3/2014	Birth of son
3/2015-5/2015	Parental care
1/2017-3/2017	Birth of daughter and family care

Awards and fellowships:

Ruttner-Preis 2006 of the Societas Internationalis Limnologiae (SIL) Austria

Umwelt-Preis 2009 der Stadt Wien

Hanse-Wissenschaftskolleg Junior Fellowship (12 months, Delmenhorst, Germany)

ERC-Starting Grant 2016

Third-party funded research projects:

PlanktoTrait – Trait-based biodiversity and multitrophic dynamics under external forcing: a combined planktotron and modelling approach (DFG SI 1668/1-1, Co-PI, € 257.000,-, 2014-2017)
Illuminating Lake Ecosystems (Leibniz Competition 2014, SAW-2015-IGB-1, Co-PI, € 998.000,-, 2015-2018)
Urban Water Interfaces (DFG Research Training Group, GRK 2032/1, PhD-Supervisor, € 4.800.000,-, 2015-2019)
FLUFLUX – Fluvial meta-ecosystem functioning: Unravelling regional ecological controls behind fluvial carbon fluxes (ERC-2016-STG 716169, PI, 1.487.000,-, 2017-2022)
EUROFLOW – A European training and research network for environmental flow management in river basins (Horizon 2020 MSCA-ITN-2017 765553, Co-Applicant, 4.099.318,-, 2017-2021)

Mentoring of students and post-docs:

Ann-Kathrin Chlup (MSc 2006), Gerald Hochedlinger (MSc 2007), Fathima Farveen (MSc 2007), Marcellin Rutegwa (MSc 2010), Fred Omengo (MSc 2010), Sabrina Hengsberger (MSc 2013), Barbara Behounek (MSc 2013, current PhD), Christina Fasching (PhD 2015), Thomas Fuss (MSc 2015), Roland Corti (post-doc 2014-2015), Hoseung Jung (MSc 2015), Maria Isabel Arce (post-doc 2014-2018), Clara Romero (current PhD), Jeremy Fonvielle (current PhD), Frank Masese (post-doc 2017-2019), Lukas Thuile Bistarelli (current PhD).

Reviewing activities for funding institutions and scientific journals:

German Research Foundation (DFG, Germany); Österreichische Agentur für Internationale Mobilität und Kooperation in Bildung, Wissenschaft und Forschung (OeAD, Austria); National Science Foundation USA (NSF)

Aquatic Microbial Ecology, Aquatic Sciences, Biodiversity and Conservation, Biogeochemistry, Biogeosciences, Canadian Journal of Microbiology, Ecology, Ecological Indicators, Ecosphere, Ecosystems, Environmental Microbiology, Environmental Science and Technology, FEMS Microbiology Ecology, Frontiers in Ecology and Evolution, Frontiers in Microbiology, Freshwater

Science (Journal of the North American Benthological Society), Fundamental and Applied Limnology, Geochimica et Cosmochimica Acta, Geophysical Research Letters, Global Change Biology, Hydrological Processes, Limnologica, Limnology and Oceanography, Limnology and Oceanography Methods, Marine and Freshwater Research, Marine Ecology Progress Series, Nature Climate Change, Nature Communications, Oecologia, Oikos, Proceedings of the National Academy of Sciences USA, Science of the Total Environment, Scientific Reports, The ISME Journal, Water Research.

Further activities:

Organising committee of the international meeting of young scientists in limnology "Fresh Blood for Fresh Water" in Lunz am See, May 16-18 2008, July 2-4 2010, February 27-March 1 2013.

ICBM Summer School 2013 - Biogeochemistry of tidal flats and beaches of the southern North Sea coast (Wadden Sea), Spiekeroog and Oldenburg, August 10-24 2013.

SMIRES ("Science and Management of intermittent rivers and ephemeral streams", COST Action CA15113, May 2016-April2020): Co-Chair and Grant Holder Scientific Representative.

Panel memberships: Tenure-track junior research group leadership at IGB 2014, W3-Professorship in Ecohydrology at Humboldt University and IGB 2015.

Professional affiliations:

Society for Freshwater Science (SFS, former NABS), Societas Internationalis Limnologiae (SIL), Association for the Sciences of Limnology and Oceanography (ASLO)

Invited talks:

Singer G & TJ Battin 2009. Towards ecosystem-level pollution ecology: Integrative responses of invertebrate consumers to nutrient enrichment. Workshop "Ecological responses of streams to nutrient enrichment", University College Cork, Ireland, February 23-24 2009.

Singer G 2011. New research trajectories for running water carbon biogeochemistry - Moving onto larger scales and beyond concentration. Hearing for working group leader position, WasserCluster Lunz Biological Station, September 22 2011.

Singer G 2012. Riverine carbon biogeochemistry – mechanisms and players behind bulk fluxes. Hearing for junior research group leader position, IGB – Leibniz Institute of Freshwater Ecology and Inland Fisheries, December 18 2012.

Singer G 2014. Signatures of dissolved organic matter in a dendritic stream meta-ecosystem: Tracing upstream landscape and fluvial processes. Seminar at University of Potsdam, June 23 2014.

Singer G 2015. A Lagrangian travel through the fluvial meta-ecosystem: Following molecules from continental soils to the (deep) sea. Hanse Wissenschaftskolleg Fellow Lecture, Delmenhorst, January 14 2015.

Singer G 2016. Fluvial organic matter (processing): Deeper Meanings of Catchment Integration. Seminar at University of Uppsala, Department of Limnology, January 14 2016.

Singer G 2016. Fluvial organic matter (processing): Deeper Meanings of Catchment Integration. HELENA Lecture Series "Environmental Sciences", Helmholtz Zentrum München, February 1 2016.

Singer G 2016. The dance between molecules and microbes. Seminar at Institute of Groundwater Ecology, Helmholtz Zentrum München, February 2 2016.

Singer G 2016. Organic matter processing in river networks: looking behind ecosystem metabolism and CO2 evasion. Kolloquium Wasserwesen, TU Berlin, February 8 2017.

Contributions to workshops and conferences (first authorships only):

Singer G, Marchesani C, Weigelhofer G, Panzenböck M & TJ Battin 2002. Streames-Austria: Work in Progress. Poster, national SIL-conference, Lunz, Austria, October 23-25 2002.

Singer GA, Weigelhofer G, Panzenböck M, Marchesani C & TJ Battin 2003. Effects of a wastewater treatment plant on the energy flow through the macroinvertebrate community in an urban stream. 51st annual meeting North American Benthological Society (NABS), Athens, Georgia, May 27-31 2003.

Singer GA, Panzenboeck M, Weigelhofer G, Marchesani C, Wanek W & TJ Battin 2003. Memory effect of carbon fractionation in periphytic biofilms: does flow history matter? 5th Austrian Workshop "Stable Isotopes in Ecological and Earth Sciences", Innsbruck, Austria, November 7-8 2003.

Singer GA, Panzenboeck M, Weigelhofer G, Marchesani C & TJ Battin 2004. Response of a stream macroinvertebrate community to a wastewater treatment plant as revealed by stable C- and N-isotopes. 52nd annual meeting NABS, Vancouver, Canada, June 6-11 2004.

Singer GA & TJ Battin 2005. Consumer-resource stoichiometry in stream invertebrates: effects of allochthonous inputs on invertebrate stoichiometry, biodiversity and food chain properties. Poster, Meeting of the American Society of Limnology and Oceanography (ASLO), Santiago de Compostela, Spain, June 19-24 2005.

Singer GA, Besemer K, Hödl I-A, Roura-Carol M & TJ Battin 2006. Microbial controls of nutrient and carbon cycling in heterogenous flow landscapes. Poster, International Society of Microbial Ecology ISME-11, Vienna, Austria, August 20-25 2006.

Singer GA, Hödl I-A, Besemer K, Sollböck E & TJ Battin 2006. The LunzeRinnen – introducing a new dimension of experimental research in stream ecology. Construction of large-scale streamside mesocosms and results of first experiments. Poster, national SIL-conference, Innsbruck, Austria, October 22-24 2006.

Singer GA, Hödl I-A, Besemer K. & TJ Battin 2007. Wild water slime: Microbial diversity and spatial structure of periphytic biofilms controlling stream ecosystem functions in landscapes of increasing flow heterogeneity. EURODIVERSITY meeting, Paris, France, October 3-5 2007.

Singer GA, Besemer K, Hoedl I-A, Hochedlinger G., Chlup A-K, Schmitt-Kopplin P & TJ Battin 2008. Favourite meals going down the drain: How periphytic biofilms control stream carbon dynamics. Poster, ISME-12, Cairns, Australia, August 17-22 2008.

Singer GA, Besemer K, Hoedl I-A, Hochedlinger G, Chlup, A-K, Schmitt-Kopplin P & TJ Battin 2008. Favourite meals going down the drain: How periphytic biofilms control stream carbon dynamics. Poster, BIOFILMS III conference, Munich, Germany, October 6-8 2008.

Singer GA, Besemer K, Hoedl I-A & TJ Battin 2009. What is a greedy ant and why does it eat so much sugar? National SIL-conference, Salzburg, Austria, October 26-28 2009.

Singer GA, Besemer K, Hoedl I-A & TJ Battin 2010. Carbohydrate monomer uptake at biofilm and stream ecosystem scale. ASLO-NABS Meeting, Santa Fe, New Mexico, USA, June 6-11 2010.

Singer GA, Besemer K, Hengsberger S, Bertuzzo E, Dittmar T & TJ Battin 2012. Processing of terrestrially derived dissolved organic matter in an Alpine stream network. Soil organic matter SOM-5, Ascona, Switzerland, October 7-11 2012.

Singer GA, Wilhelm L, Fasching C, Besemer K, Niggemann J, Steier P, Dittmar T & TJ Battin 2013. Consequences of Alpine glacier retreat on the biogeochemistry and microbial biodiversity of glacier streams. SEFS 8, Münster, Germany, July 1-July 5 2013.

Singer GA, Besemer K, Bertuzzo E, Dittmar T & TJ Battin 2014. Signatures of dissolved organic matter in a dendritic stream meta-ecosystem: tracing upstream landscape and fluvial processes. JASM Meeting, Portland, USA, May 18-23 2014.

Singer GA, Besemer K, Wilhelm L, Fasching C, Niggemann J, Steier P, Bertuzzo E, Dittmar T & TJ Battin 2014. Geo-metabolomics in Alpine systems: Glaciers and fluvial networks. Geometabolomics Workshop, Hanse-Wissenschaftskolleg, Delmenhorst, Germany, Nov 24-28 2014.

Singer GA, Besemer K, Wilhelm L, Dittmar T & TJ Battin. Linking high resolution descriptions of dissolved organic matter and microbial community composition in Alpine stream environments. ASLO Meeting, Granada, Spain, February 22-27 2015.

Publications (ISI-listed, coauthorships with indicated contribution, top 5 indicated by *):

1. Singer GA, Panzenboeck M, Weigelhofer G, Marchesani C, Waringer J, Wanek W & TJ Battin 2005. Flow history explains temporal and spatial variation of carbon fractionation in periphytic biofilms. Limnology and Oceanography 50(2): 706-712.

2. Singer GA & TJ Battin 2007. Anthropogenic subsidies alter consumer-resource stoichiometry, biodiversity and food-chain properties in a recipient stream. Ecological Applications 17(2): 376-389.

3. Solimini AG, **Singer GA**, Martì E, Battin TJ, Gafny S, Gerino M, Morais M, Puig MA, Pusch M, Ruggiero A, Voreadou C & F Sabater 2005. Nutrient transient storage by the invertebrate assemblage in streams with constrasting nutrient loads. Verhandlungen der Internationalen Vereinigung für Limnologie 29: 807-810. **[contribution**: description of project-wide standard operating procedures, planning, field work, data analysis, manuscript writing**]**

4. Singer GA, Besemer K, Hödl I-A., Chlup A-K, Hochedlinger G, Stadler P & TJ Battin 2006. Microcosm design and evaluation to study stream microbial biofilms. Limnology and Oceanography Methods 4: 436-447.

5. Besemer K, **Singer GA**, Limberger R, Chlup A-K, Hochedlinger G, Hödl I-A, Baranyi C & TJ Battin 2007 Biophysical controls on community succession in stream biofilms. Applied and Environmental Microbiology 73: 4966-4974. **[contribution:** planning, experimental work, data analysis**]**

6. Besemer K, Hödl I-A, **Singer GA** & TJ Battin 2009. Architectural differentiation reflects bacterial community structure in stream biofilms. The ISME Journal 3: 1318-1324. **[contribution:** planning, experimental work**]**

7. Besemer K, **Singer GA**, Hödl I-A & TJ Battin 2009. Bacterial community composition and biodiversity of stream biofilms in spatially variable flow environments. Applied and Environmental Microbiology 75:7189-7195. **[contribution:** planning, experimental work, data analysis, manuscript writing**]**

8. Bottacin-Busolin A, **Singer GA**, Zaramella M, Battin TJ & A Marion 2009. Effects of streambed morphology and biofilm growth on the transient storage of solutes. Environmental Science & Technology, 43, 7337-7342. **[contribution**: all planning and field/lab work, data analysis, manuscript writing**]**

9. Singer GA, Besemer K, Schmitt-Kopplin P, Hödl I-A & TJ Battin 2010. Physical heterogeneity increases biofilm resource use and its molecular diversity in stream mesocosms. PLoS ONE 5(4): e9988. doi:10.1371/journal.pone.0009988.

10. Hall EK, **Singer GA**, Kainz MJ & TJ Lennon 2010. Evidence for a temperature acclimation mechanism in bacteria: an empirical test of a hypothesized membrane-mediated trade-off. Functional Ecology 24: 898-908, doi: 10.1111/j.1365-2435.2010.01707.x. **[contribution**: data analysis, manuscript writing**]**

11. Singer GA, Besemer K, Hochedlinger G, Chlup A-K & TJ Battin 2011. Monomeric carbohydrate uptake and structure-function coupling in stream biofilms. Aquatic Microbial Ecology 62: 71-83.

12. Hall EK, **Singer GA**, Pölzl M, Hämmerle I, Schwarz C, Daims H, Maixner F & TJ Battin 2011. Looking inside the box: using Raman microspectroscopy to deconstruct microbial biomass stoichiometry one cell at a time. The ISME Journal 5: 196-208, doi: 10.1038/ismej.2010.115. **[contribution**: data analysis, manuscript writing**]**

13. Hödl I, Hödl J, Wörman A, **Singer GA**, Besemer K & TJ Battin 2011. Voronoi tesselation captures very early clustering of single primary cells as induced by interactions in nascent biofilms. PLoS ONE 6(10): e26368. doi:10.1371/journal.pone.0026368. **[contribution:** experimental work, data analysis, manuscript writing**]**

14. Welti N, Bondar-Kunze E, **Singer GA**, Tritthart, M, Zechmeister-Boltenstern S, Hein T & G Pinay 2012. Large-scale controls on potential respiration and denitrification in riverine floodplains. Ecological Engineering 42: 73-84. **[contribution**: data analysis, manuscript writing**]**

15. Striebel M, **Singer GA**, Stibor H & T Andersen 2012. Trophic overyielding: Phytoplankton diversity promotes zooplankton productivity. Ecology 93 (12): 2719-2727. **[contribution**: data analysis, manuscript writing**]**

16. Singer GA, Fasching C, Wilhelm L, Niggemann J, Steier P, Dittmar T & TJ Battin 2012. Biogeochemically diverse organic matter in Alpine glaciers and its downstream fate. Nature Geoscience 5: 710-714, doi:10.1038/ngeo1581.

17. Wilhelm L, **Singer GA**, Fasching C, Battin TJ & K Besemer 2013. Microbial biodiversity in glacier-fed streams. The ISME Journal 7: 1651-1660, doi: 10.1038/ismej.2013.44. **[contribution**: study planning, field work, data analysis, manuscript writing**]**

18. Ceola S, Hödl I, Adlboller M, **Singer GA**, Bertuzzo E, Mari L, Botter G, Waringer J, Battin TJ & A Rinaldo 2013. Hydrologic variability affects invertebrate grazing on phototrophic biofilms in stream microcosms. PLoS ONE 8(4): doi:10.1371/journal.pone.0060629. **[contribution**: study planning, data analysis, manuscript writing**]**

19. Minaya V, McClain ME, Moog O, Omengo F & **GA Singer** 2013. Scale-dependent effects of rural activities on benthic macroinvertebrates and physico-chemical characteristics in headwater streams of the Mara River, Kenya. Ecological Indicators 32: 116-122. **[contribution**: data analysis, manuscript writing, student guidance**]**

20. Besemer K, **Singer GA**, Quince C, Bertuzzo E, Sloan W & TJ Battin 2013. Headwaters are critical reservoirs of microbial diversity for fluvial networks. Proceedings of the Royal Society B 280 (1771): 20131760, doi: 10.1098/rspb.2013.1760. **[contribution**: study planning, field work, data analysis, manuscript writing**]**

21. Loisl F, **Singer GA** & H Keckeis 2014. Method-integrated fish assemblage structure at two spatial scales along a free-flowing stretch of the Austrian Danube. Hydrobiologia 729: 77-94, doi: 10.1007/s10750-013-1588-4. **[contribution**: data analysis, manuscript writing**]**

22. Peter H, **Singer GA**, Preiler C, Chifflard P & TJ Battin 2014. Scales and drivers of temporal pCO2 dynamics in an Alpine stream. Journal of Geophysical Research Biogeosciences 05/2014, doi: 10.1002/2013JG002552. **[contribution**: data analysis, manuscript writing**]**

23. Wilhelm L, Besemer K, Fasching C, Urich T, Singer GA, Quince C & TJ Battin 2014. Rare but active taxa contribute to community dynamics of benthic biofilms in glacier-fed streams. Environmental Microbiology: doi:10.1111/1462-2920.12392. **[contribution**: study planning, field work, data analysis, manuscript writing**]**

24. Fasching C, Behounek B, **Singer GA** & TJ Battin 2014. Microbial degradation of terrigenous dissolved organic matter and consequences for carbon cycling in brown-water streams. Scientific Reports 4: 4981, doi: 10.1038/srep04981. **[contribution**: study planning, data analysis, manuscript writing**]**

25. Ceola S, Bertuzzo E, **Singer G**, Battin TJ, Montanari A & A Rinaldo 2014. Hydrologic controls on basin-scale distribution of benthic invertebrates. Water Resources Research 50 (4): 2903-2920, doi: 10.1002/2013WR015112. **[contribution**: data analysis, manuscript writing**]**

26. Gessner MO, Hinkelmann R, Nützmann G, Jekel M, **Singer G**, Lewandowski J, Nehls T & M Barjenbruch 2014. Urban water interfaces. Journal of Hydrology 514: 226-232. **[contribution**: manuscript writing**]**

27. Widder S, Besemer K, **Singer GA**, Ceola S, Bertuzzo E, Quince C, Sloan WT, Rinaldo A & TJ Battin 2014. Fluvial network organization imprints on microbial co-occurrence networks. Proceedings of the National Academy of Sciences 111 (35): 12799-12804, doi: 10.1073/pnas.1411723111. **[contribution**: study planning, field work, data analysis, manuscript writing**]**

28. Haggerty R, Ribot M, **Singer GA**, Marti E, Argerich A, Agell G & TJ Battin 2014. Ecosystem respiration increases with biofilm growth and bedforms: Flume measurements with resazurin. JGR Biogeosciences 119: 2220-2230, doi: 10.1002/2013JG002498. [**contribution**: data analysis, manuscript writing**]**

29. Hofhansl F, Schnecker J, **Singer G** & W Wanek 2015. New insights into mechanisms driving wood production in tropical forests. New Phytologist 205: 137-146. **[contribution**: data analysis, manuscript writing**]**

30. Osterholz H, **Singer GA**, Wemheuer B, Daniel R, Simon M, Niggemann J & T Dittmar 2016. Deciphering associations between dissolved organic molecules and bacterial communities in a pelagic marine system. The ISME Journal 10 (7): 1717-1730, doi: 10.1038/ismej.2015.231. **[contribution**: data analysis, manuscript writing**]**

31. Burian A, Schagerl M, Yasindi A, **Singer GA**, Kaggwa MN & M Winder 2016. Benthic-pelagic coupling drives non-seasonal zooplankton blooms and restructures energy flows in a tropical food web. Limnology & Oceanography 61: 795-805, doi: 10.1002/lno.10241 **[contribution**: data analysis, manuscript writing**]**

32. Bodmer P, Heinz M, Pusch M, **Singer GA** & K Premke 2016. Carbon dynamics and their link to DOM quality across contrasting stream ecosystems. Science of the Total Environment 553:574-586. **[contribution**: data analysis, manuscript writing**]**

33. Sieczko A, Demeter K, **Singer G**, Tritthart M, Preiner S, Mayr M, Meisterl K & P Peduzzi 2016. Aquatic methane dynamics in a human-impacted river-floodplain of the Danube. Limnology & Oceanography: doi: 10.1002/lno.10346. **[contribution**: laboratory and data analysis, manuscript writing**]**

34. Schelker J, **Singer G**, Ulseth A, Hengsberger S & TJ Battin 2016. CO2 evasion from a steep, high gradient stream network: importance of seasonal and diurnal variation in aquatic pCO2 and gas transfer. Limnology and Oceanography 61: 1826-1838, doi: 10.1002/lno.10339. **[contribution**: study design, field and laboratory work, data analysis, manuscript writing**]**

35. Baranov V, Lewandowski J, Romeijn P, **Singer G** & S Krause 2016. Effects of bioirrigation of non-biting midges (Diptera: Chironomidae) on lake sediment respiration. Scientific Reports, doi: 10.1038/srep27329. **[contribution**: data analysis, manuscript writing**]**

36. Kalinkat G, Cabral JS, Darwall W, Ficetola GF, Fisher JL, Giling DP, Gosselin M-P, Grossart H-P, Jähnig SC, Jeschke JM, Knopf K, Larsen S, Onandia G, Pätzig M, Saul W-C, **Singer G**, Sperfeld E & I Jaric 2016. Flagship umbrella species needed for the conservation of overlooked aquatic biodiversity. Conservation Biology 31(2): 481-485. **[contribution**: manuscript writing**]**

37. Fuß T, Behounek B, Ulseth AJ & **GA Singer** 2017. Land use controls stream ecosystem metabolism by shifting dissolved organic matter and nutrient regimes. Freshwater Biology 62: 582-599, doi: 10.1111/fwb.12887.

38. Grubisic M, **Singer G**, Bruno MC, van Grunsven RHA, Manfrin A, Monaghan MT & F Hölker 2017. Artificial light at night decreases biomass and alters community composition of benthic primary producers in a sub-alpine stream. Limnology and Oceanography, doi: 10.1002/lno.10607. **[contribution**: study planning, data analysis, manuscript writing**]**

39. Ulseth AJ, Bertuzzo E, **Singer GA**, Schelker J & TJ Battin 2017. Climate-induced changes in spring snowmelt impact ecosystem metabolism and carbon fluxes in an Alpine stream network. Ecosystems, doi: 10.1007/s10021-017-0155-7. **[contribution**: study design, field work, data analysis, manuscript writing**]**

40. Gall A, Uebel U, Ebensen U, Hillebrand H, Meier S, Singer G, Wacker A & M Striebel 2017. Planktotrons: A novel indoor mesocosm facility for aquatic biodiversity and food web research. Limnology & Oceanography Methods 15: 663-677. **[contribution**: study design, data analysis, manuscript writing**]**

41. Ladwig R, Heinrich L, Singer G & M Hupfer 2017. Sediment core data reconstruct the management history and usage of a heavily modified urban lake in Berlin, Germany. Environmental Science and Pollution Research (accepted), doi 10.1007/s11356-017-0191-z. **[contribution**: data analysis, manuscript writing**]**

42. Manfrin A, Singer G, Larsen S, Weiss N, van Grunsven RHA, Weiss N-S, Wohlfahrt S, Monaghan MT & F Hölker 2017. Artificial light at night affects organism flux across ecosystem boundaries and drives community structure in the recipient ecosystem. Frontiers in Environmental Science, doi: 10.3389/fenvs.2017.00061. **[contribution**: data analysis, manuscript writing**]**

43. Lesaulnier CC, Herbold CW, Pelikan C, Berry D, Gerard C, Le Coz X, Gagnot S, Niggemann J, Dittmar T, Singer GA & A Loy 2017. Bottled aqua incognita: Microbiota assembly and dissolved organic matter diversity in natural mineral waters. Microbiome 5: 126, doi; 10.1186/s40168-017-0344-9. **[contribution**: laboratory and data analysis, manuscript writing**]**

44. Grubisic M, Singer G, Bruno MC, van Grunsven RHA, Manfrin A, Monaghan MT & F Hölker. A pigment composition analysis reveals community changes in stream periphyton under low-level artificial light at night. Limnologica (accepted). **[contribution**: study planning, data analysis, manuscript writing**]**

45. Singer GA, Omengo F, McClain ME & TJ Battin. Land use impacts the quality of organic carbon and its metabolism in the headwaters of the Mara River catchment, Kenya. Biogeochemistry (submitted).

Popular science publications, news coverage, scientific outreach:

Zweimüller I, Guttmann S, Singer GA, Schober E-M & A Weissenbacher (2000). Eine neue Fischart für Österreich - *Neogobius syrman* (Nordmann, 1940). Österreichs Fischerei 53 (5/6): 186-189.

National newspaper *Der Standard* (Gabriel Singer, Katharina Besemer, Tom J. Battin): Bakterienfauna reinigt Gewässer. April 6 2010.

National newspaper *Der Standard* (Tom Battin, Gabriel Singer, Katharina Besemer, Christina Fasching, Linda Wilhelm): Der Bach, ein Superorganismus. April 12 2011.

Ö1-Radiokolleg „Quellen des Lebens – Ressource Wasser". August 1-4 2012.

National newspaper *Der Standard* (Tom Battin, Gabriel Singer, Katharina Besemer, Christina Fasching, Linda Wilhelm, Peter Steier): Gletscher funktionieren als „Tiefkühltruhen" für Kohlenstoff. September 24 2012.

National newspaper *Der Standard* (Katharina Besemer, Gabriel Singer, Tom J. Battin): Mikrobielle Diversität ist in kleinen Bächen am höchsten. October 2 2013.

Newspaper *Wiener Zeitung* (Katharina Besemer, Gabriel Singer, Tom J. Battin): Vielfalt von Mikroben schwindet flussabwärts. October 2 2013.

National newspaper *Der Standard* (Tom Battin et al.): Biofilme fungieren als Fingerabdruck der Umweltbedingungen in Flusslandschaften. August 19 2014.

Wild & Scenic Rivers Film Festival, Berlin. Wissenschaftlicher Podiumsgast beim FlussForscherMatinee zum Thema „Nutzungskonflikte, Renaturierung, Wiederansiedlung". January 22-24 2016.

National newspaper *Die Süddeutsche Zeitung* (Gabriel Singer et al.): Himmelsglühen, Lichtverschmutzung. Wenn der Mensch der Natur die Nacht stiehlt. October 2 2016.