2019

Abdel AA, **Rittmann SKMR**, Fino D, Bochmann G (2019) The physiology of methanogens in the presence of inorganic and organic compounds. Book of Abstracts – Workshop on Gas in Biotechnology. ISBN: 978---3---900932---60---2.

Alves RJE, Kerou M, Zappe A, Bittner R, Abby SS, Schmidt HA, **Pfeifer K, Schleper C** (2019) Ammonia Oxidation by the Arctic Terrestrial Thaumarchaeote Candidatus Nitrosocosmicus arcticus Is Stimulated by Increasing Temperatures. Frontiers in Microbiology **10:** 1571. doi:10.3389/fmicb.2019.01571.

Bassani F, **Zink IA**, **Pribasnig T**, Wolfinger MT, Romagnoli A, Resch A, **Schleper C,** Bläsi U, La Teana A (2019) Indications for a moonlighting function of translation factor aIF5A in the crenarchaeum Sulfolobus solfataricus, RNA Biology **16**: 5, 675---685. doi:10.1080/15476286.2019.1582953

Blazevic A, Albu M, Mitsche S, **Rittmann SKMR**, Habler G, Milojevic T (2019) Biotransformation of Scheelite CaWO4 by the Extreme Thermoacidophile Metallosphaera sedula: Tungsten Microbial Interface. Frontiers in Microbiology **10**(1492): 1---11. doi:10.3389/fmicb.2019.01492.

Bochmann G, Fuchs W, **Rittmann SKMR** (Hrg) (2019) Book of Abstracts – Workshop on Gas in Biotechnology, ISBN: 978---3---900932---60---2

De Corte D, **Paredes G**, Yokokawa T, Sintes E, Herndl GJ (2019) Differential Response of Cafeteria roenbergensis to Different Bacterial and Archaeal Prey Characteristics. Microbial Ecology: an international journal **78**(1) 1---5. doi:10.1007/s00248---018---1293---y

Degli Esposti M, Mentel M, Martin W, **Sousa FL** (2019) Oxygen Reductases in Alphaproteobacterial Genomes: Physiological Evolution From Low to High Oxygen Environments. Frontiers in Microbiology **10:** 499. doi:10.3389/fmicb.2019.00499.

Ergal İ, Fuchs W, Hasibar B, Bochmann G, **Rittmann SKMR** (2019) The physiology of dark fermentative biohydrogen production. Book of Abstracts – Workshop on Gas in Biotechnology. ISBN: 978---3---900932---60---2.

Hasibar B, **Ergal İ**, Bochmann G, **Rittmann SKMR**, Fuchs W (2019) Competing acetate consumption and production inside a microbial electrolysis cell. Book of Abstracts – Workshop on Gas in Biotechnology. ISBN: 978---3---900932---60---2.

Manoharan L, Kozlowski JA, Murdoch RW, Löffler FE, **Sousa FL, Schleper C** (2019) Metagenomes from Coastal Marine Sediments Give Insights into the Ecological Role and Cellular Features of Loki--- and Thorarchaeota. mBio **10** (5): e02039---19. doi**:**10.1128/mBio.02039---19.

Mauerhofer LM, Pappenreiter P, Paulik C, Bernacchi S, Seifert AH, **Rittmann SKMR** (2019) Methods for quantification of growth and productivity in anaerobic microbiology and biotechnology. Folia Microbiologica **64**(3): 321---360. doi:10.1007/s12223---018---0658---4.

Mauerhofer LM, Reischl B, Schmider T, Schupp B, Nagy K, Pappenreiter P, Zwirtmayr S, Schuster B, Bernacchi S, Seifert AH, Paulik C, **Rittmann SKMR** (2019) H2/CO2 fed---batch cultivation of Methanobacterium thermaggregans. Book of Abstracts – Workshop on Gas in Biotechnology. ISBN:978---3---900932---60---2.

Milojevic T, Kölbl D, Ferrière L, Albu M, Kish A, Flemming RL, Koeberl C, Blazevic A, **Zebec Z, Rittmann SKR, Schleper C**, Pignitter M, Somoza V, Schimak MP, Rupert AN (2019) Exploring the

microbial biotransformation of extraterrestrial material on nanometer scale. Scientific reports **9**: 18028. doi:10.1038/s41598---019---54482---7.

Pappenreiter P, Zwirtmayr S, **Mauerhofer LM, Rittmann SKMR,** Paulik C (2019) Development of a simultaneous bioreactor system for characterization of gas production kinetics of methanogenic archaea at high pressure. Engineering in Life Sciences. **19**(7): 537---544. doi:10.1002/elsc.201900035.

Rittmann SKMR, Reischl B, Ergal İ (2019) Utilization of formate by the Crenarchaeon Desulfurococcus amylolyticus DSM 16532. Book of Abstracts – Workshop on Gas in Biotechnology. ISBN: 978---3---900932---60---2.

Schleper C (2019) Das Archaeon Nitrososphaera viennensis: Unbekannte Helden im Stickstoffkreislauf. Biologie in unserer Zeit **47**(5): 320---324. doi: 10.1002/biuz.201710631.

Siljanen HMP, Alves RJE, Ronkainen JG, Lamprecht RE, Bhattarai HR, **Bagnoud A**, Marushchak ME, Martikainen PJ, **Schleper C,** Biasi C (2019) Archaeal nitrification is a key driver of high nitrous oxide emissions from arctic peatlands. Soil Biology and Biochemistry **137:** 107539. doi:10.1016/j.soilbio.2019.107539.

Taubner RS, Pappenreiter P, Zwicker J, Smrzka D, **Pruckner C, Kolar P**, Bernacchi S, Seifert AH, Krajete A, Bach W, Peckmann J, Paulik C, Firneis MG, **Schleper C, Rittmann SKMR** (2019) Simulating putative Enceladus---like conditions: The possibility of biological methane production on Saturn's icy moon, Origins: From the Protosun to the First Steps of Life. Proceedings IAU Symposium No. 345. doi:10.1017/S1743921319001789

Videira MAM, Lobo SAL, **Sousa FL,** Saraiva LM (2019) Identification of the sirohaem biosynthesis pathway in Staphylococcus aureus. The FEBS Journal. doi:10.1111/febs.15091.

Weber PM, Mössel F, Paredes GF, Viehböck T, Vischer NOE, **Bulgheresi S** (2019) A Bidimensional Segregation Mode Maintains Symbiont Chromosome Orientation toward Its Host. Current Biology **29**(18): P3018---3028.e4. doi:10.1016/j.cub.2019.07.064.

Wu HY, Nöllenburg M, **Sousa FL,** Viola I (2019) Metabopolis: scalable network layout for biological pathway diagrams in urban map style. BMC Bioinformatics **20:** 187. doi:10.1186/s12859---019---2779---4.

Yang K, He Y, Park CG, Kang YS, Zhang P, Han Y, Cui Y, **Bulgheresi S**, Anisimov AP, Dentovskaya SV, Ying X, Jiang L, Ding H, Njiri OA, Zhang S, Zheng G, Xia L, Kan B, Wang X, Jing H, Yan M, Li W, Wang Y, Xiamu X, Chen G, Ma D, Bartra SS, Plano GV, Klena JD, Yang R, Skurnik M, Chen T (2019) Yersinia pestis Interacts With SIGNR1 (CD209b) for Promoting Host Dissemination and Infection. Frontiers in Immunology **10**: 96. doi:10.3389/fimmu.2019.00096.

Zink IA, Pfeifer K, Wimmer E, Sleytr UB, Schuster B, **Schleper C** (2019) CRISPR---mediated gene silencing reveals involvement of the archaeal S---layer in cell division and virus infection. Nature Communications **10:** 4797. doi:10.1038/s41467---019---12745---x.

2018

Abby SS, Melcher M, Kerou M, Krupovic M, **Stieglmeier M, Rossel C, Schleper C** (2018) Candidatus Nitrosocaldus cavascurensis, an Ammonia Oxidizing, Extremely Thermophilic Archaeon with a Highly Mobile Genome. Frontiers in Microbiology **9**: 28. doi:10.3389/fmicb.2018.00028

Abdel Azim A, Rittmann SKR, Fino D, Bochmann G (2018) The physiological effect of heavy metals and volatile fatty acids on Methanococcus maripaludis S2. Biotechnology for Biofuels **11**: 301. doi: 10.1186/s13068-018-1302-x.

Alves RJE, Minh BQ, **Urich T**, von Haeseler A, **Schleper C** (2018) Unifying the global phylogeny and environmental distribution of ammonia-oxidising archaea based on amoA genes. Nature communications **9**(1): 1517. doi:10.1038/s41467-018-03861-1.

Arce MI, von Schiller D, Bengtsson MM, Hinze C, Jung H, **Alves RJE, Urich T,** Singer G (2018) Drying and Rainfall Shape the Structure and Functioning of Nitrifying Microbial Communities in Riverbed Sediments. Frontiers in Microbiology **9**: 2794. doi:10.3389/fmicb.2018.02794.

Baumann L, **Taubner R**, Bauersachs T, **Steiner M, Schleper C**, Peckmann J, **Rittmann S**, Birgel D (2018) Intact polar lipid and core lipid inventory of the hydrothermal vent methanogens Methanocaldococcus villosus and Methanothermococcus okinawensis. Organic Geochemistry **126**: 33-42. doi:10.1016/j.orggeochem.2018.10.006

Čapek P, Manzoni S, Kaštovská E, Wild B, Diáková K, Bárta J, Schnecker J, Biasi C, Martikainen PJ, **Alves RJE**, Guggenberger G, Gentsch N, Hugelius G, Palmtag J, Mikutta R, Shibistova O, **Urich T**, **Schleper C**, Richter A, Šantrůčková H (2018) A plant-microbe interaction framework explaining nutrient effects on primary production. Nature Ecology & Evolution **2**(10): 1588-1596. doi: 10.1038/s41559-018-0662-8.

Duarte AG, Catarino T, White GF, Lousa D, **Neukirchen S**, Soares CM, **Sousa FL**, Clarke TA, Pereira IAC (2018) An electrogenic redox loop in sulfate reduction reveals a likely widespread mechanism of energy conservation. Nature Communications **9**: 5448. doi:10.1038/s41467-018-07839-x.

Ergal I, Fuchs W, Hasibar B, Thallinger B, Bochmann G, **Rittmann SKR** (2018) The physiological effect of heavy metals and volatile fatty acids on Methanococcus maripaludis. Biotechnology advances **36**(8): 2165-2186. doi:10.1016/j.biotechadv.2018.10.005.

Gentsch N, Wild B, Mikutta R, Čapek P, Diáková K, Schrumpf M, Turner S, Minnich C, Schaarschmidt F, Shibistova O, Schnecker J, **Urich T**, **Gittel A,** Šantrůčková H, Bárta J, Lashchinskiy N, Fuß R, Richter A, Guggenberger G (2018) Temperature response of permafrost soil carbon is attenuated by mineral protection. Global change biology **24**(8): 3401-3415. doi:10.1111/gcb.14316.

Kozlowski J, Johnson ME, Ledesma-Vázquez J, Birgel D, Peckmann J, **Schleper C** (2018) Microbial diversity of a closed salt lagoon in the Puertecitos area, Upper Gulf of California. Ciencias Marinas **44**(2): 71-90. doi:10.7773/cm.v44i2.2825.

Mauerhofer LM, Pappenreiter P, Paulik C, Seifert AH, Bernacchi S, **Rittmann SK** (2018) Methods for quantification of growth and productivity in anaerobic microbiology and biotechnology. Folia Microbiologica 1-10. doi:10.1007/s12223-018-0658-4.

Mauerhofer LM, Reischl B, Schmider T, Schupp B, Nagy K, Pappenreiter P, Zwirtmayr S, Schuster B, Bernacchi S, Seifert AH, Paulik C, **Rittmann SKR** (2018) Physiology and methane productivity of Methanobacterium thermaggregans. Applied Microbiology and Biotechnology **102**(17): 7643-7656. doi:10.1007/s00253-018-9183-2.

Pende M, Becker K, Wanis M, Saghafi S, Kaur R, Hahn C, **Pende N**, Foroughipour M, Hummel T, Dodt HU (2018) High-resolution ultramicroscopy of the developing and adult nervous system in optically cleared Drosophila melanogaster. Nature communications **9**(1): 4731. doi:10.1038/s41467-018-07192-z

Pende N, Wang J, **Weber PM**, Verheul J, Kuru E, **Rittmann SKR, Leisch N**, Van Nieuwenhze MS, Brun YV, den Blaauwen T, **Bulgheresi S** (2018) Host-Polarized Cell Growth in Animal Symbionts. Current Biology **28**(7): 1039-1051:1039-1051.e5. doi: 10.1016/j.cub.2018.02.028

Preiner M, Xavier JC, **Sousa FL**, Zimorski V, Neubeck A, Lang SQ, Greenwell HC, Kleinermanns K, Tüysüz H, McCollom TM, Holm NG, Martin WF (2018) Serpentinization: Connecting Geochemistry, Ancient Metabolism and Industrial Hydrogenation. Life (Basel) **8**(4): E41. doi:10.3390/life8040041.

Reischl B, Ergal I, Rittmann SKR (2018) Metabolic reconstruction and experimental verification of glucose utilization in Desulfurococcus amylolyticus DSM 16532. Folia Microbiologica **63**(6): 713-723. doi:10.1007/s12223-018-0612-5.

Reischl B, Ergal I, Rittmann SKR (2018) Biohydrogen production characteristics of Desulfurococcus amylolyticus DSM 16532. International Journal of Hydrogen Energy **43**(18): 8747-8753. doi:10.1016/j.ijhydene.2018.03.121.

Rittmann SK, Seifert A, Bernacchi S (2018) Kinetics, multivariate statistical modelling, and physiology of CO2-based biological methane production. Applied Energy **216**: 751-760. doi:10.1016/j.apenergy.2018.01.075.

Šantrůčková H, Kotas P, Bárta J, Urich T, Čapek J, Palmtag J, **Alves RJE**, Biasi C, Biáková K, Gentsch N, Gittel A, Guggenberger G, Hugelius G, Lashchinksky N, Martikainen P, Mikutta R, **Schleper C**, Schnecker J, Schwab C, Shibistova O, Wild B, Richter A (2018) Significance of dark CO2 fixation in arctic soils. Soil Biology and Biochemistry **119**: 11-21. doi:10.1016/j.soilbio.2017.12.021

Söllinger A, Tveit AT, Poulsen M, Noel SJ, Bengtsson M, Bernhardt J, Frydendahl Hellwing AL, Lund P, Riedel K, **Schleper C**, Højberg O, **Urich T** (2018) Holistic Assessment of Rumen Microbiome Dynamics through Quantitative Metatranscriptomics Reveals Multifunctional Redundancy during Key Steps of Anaerobic Feed Degradation. mSystems **3**(4): e00038-18. doi:10.1128/mSystems.00038-18.

Sousa FL, Preiner M, Martin WF (2018) Native metals, electron bifurcation, and CO2 reduction in early biochemical evolution. Current opinion in microbiology **43**: 77-83. doi:10.1016/j.mib.2017.12.010.

Taubner RS, Baumann L., Bauersachs T, Clifford EL, Mähnert B, **Reischl B**, Seifert R, Peckmann J,

Rittmann SKMR, Birgel D (2018) Membrane lipid composition and amino acid excretion patterns

of Methanothermococcus okinawensis grown in the presence of inhibitors detected in the

Enceladian plume. Life **9**: 85. doiI:10.3390/life9040085.

Taubner RS, Pappenreiter P, Zwicker J, Smrzka D, **Pruckner C, Kolar F**, Bernacchi S, Seifert AH, Krajete A, Bach W, Peckmann J, Paulik C, Firneis MG, **Schleper C, Rittmann SKR** (2018) Biological methane production under putative Enceladus-like conditions. Nature Communications **9**(1): 748. doi:10.1038/s41467-018-02876-y.

Videira MAM, Lobo SAL, Silva LSO, Palmer DJ, Warren MJ, Prieto M, Coutinho A, **Sousa FL**, Fernandes F, Saraiva LM (2018) Staphylococcus aureus haem biosynthesis and acquisition pathways are linked through haem monooxygenase IsdG. Molecular Microbiology **109**(3): 385-400. doi:10.1111/mmi.14060.

Wild B, **Alves RJE**, Bárta J, Čapek P, Gentsch N, Guggenberger G, Hugelius G, Knoltsch A, Kuhry P, Lashchinskiy N, Mikutta R, Palmtag J, Prommer J, Schnecker J, Shibistova O, Takriti M, **Urich T**, Richter A (2018) Amino acid production exceeds plant nitrogen demand in Siberian tundra. Environmental Research Letters **13**(3): 4002. doi:10.1088/1748-9326/aaa4fa.

Zorz JK, **Kozlowski JA**, Stein LY, Strous M, Kleiner M (2018) Comparative Proteomics of Three Species of Ammonia-Oxidizing Bacteria. Frontiers in Microbiology **9**: 938. doi:10.3389/fmicb.2018.00938

Zwicker J, Birgel D, Bach W, Richoz S, Smrzka D, Grasemann C, Gier S, **Schleper C, Rittmann SR**, Koşun E, Peckmann J (2018) Evidence for archaeal methanogenesis within veins at the onshore serpentinite-hosted Chimaera seeps, Turkey. Chemical Geology **483**: 567-580. doi:10.1016/j.chemgeo.2018.03.027.

2017

Abdel Azim A, Pruckner C, Kolar P, Taubner R-S, Fino D, Saracco G, **Sousa F, Rittmann SK** (2017) The physiology of trace elements in biological methane production. Bioresource Technology 241: 775-786. doi: 10.1016/j.biortech.2017.05.211.

Elling FJ, Könneke M, Nicol GW, **Stieglmeier M**, Bayer B, Spieck E, de la Torre JR, Becker KW, Thomm M, Prosser JI, Herndl GJ, **Schleper C,** Hinrichs KU (2017) Chemotaxonomic characterisation of the thaumarchaeal lipidome. Environmental Microbiology 19(7): 2681-2700. doi: 10.1111/1462-2920.13759.

Loy A, Pfann C, Steinberger M, Hanson B, Herp S, Brugiroux S, Gomes Neto JC, Boekschoten MV, **Schwab C, Urich T**, Ramer-Tait AE, Rattei T, Stecher B, Berry D (2017) Lifestyle and Horizontal Gene Transfer-Mediated Evolution of Mucispirillum schaedleri, a Core Member of the Murine Gut Microbiota. American Society for Microbiology Journals. doi**:**10.1128/mSystems.00171-16.

Zhang M-M, **Alves RJE**, Zhang D-D, Han L-L, He J-Z, Zhang L-M (2017) Time-dependent shifts in populations and activity of bacterial and archaeal ammonia oxidizers in response to liming in acidic soils. Soil Biology and Biochemistry 112: 77-89. doi.org/10.1016/j.soilbio.2017.05.001.

2016

Abby S, Cury J, Guglielmini J, Neron B, Touchon M, Rocha EPC (2016) Identification of protein secretion systems in bacterial genomes. Scientific reports 6: 23080. doi: 10.1038/srep23080.

Bayer B, Vojvoda J, **Offre P, Alves RJE**, Elisabeth NH, Garcia JA, **Volland JM**, Srivastava A, **Schleper C**, Herndl GJ (2016) Physiological and genomic characterization of two novel marine thaumarchaeal strains indicates niche differentiation. The ISME Journal 10: 1051-1063. doi:10.1038/ismej.2015.200.

Becker KW, Elling FJ, Yoshinaga MY, **Söllinger A, Urich T**, Hinrichts KU (2016) Unusual Butane- and Pentanetriol-Based Tetraether Lipids in Methanomassiliicoccus luminyensis, a Representative of the Seventh Order of Methanogens. Applied and Environmental Microbiology 82(15): 4505-16. doi:10.1128/AEM.00772-16.

Beulig F, **Urich T**, Nowak M, Gleixner G, Trumbore S, Gilfillan G, Fjelland K, Kusel K (2016) Altered

carbon turnover processes and microbiomes in soils under longterm extremely high CO2

exposure. Nature Microbiology 1: 15025. doi: 10.1038/nmicrobiol.2015.25.

Bulgheresi S (2016) All the microbiology nematodes can teach us. FEMS Microbiology Ecology 92(2): fiw007. doi: 10.1093/femsec/fiw007.

Bulgheresi S (2016) I, microbe. Nature Microbiology 1(8): 16117. doi:10.1038/nmicrobiol.2016.117.

Bulgheresi S (2016) Bacterial cell biology outside the streetlight. Environmental Microbiology 18(8): 2305-2318. doi: 10.1111/1462-2920.13406

Geisen S, Koller R, Huenninghaus M, Dumack K, **Urich T**, Bonkowski M (2016) The soil food web revisited: Diverse and widespread mycophagous soil protists. Soil Biology & Biochemistry 94: 10-18. doi:10.1016/j.soilbio.2015.11.010

Jung M-Y, Kim J-G, Damste JS, Rijpstra WIC, Madsen EL, Kim S-J, Hong H, Si O-J, Kerou M, **Schleper C**, Rhee S-K (2016) A hydrophobic ammonia-oxidizing archaeon of the Nitrosocosmicus clade isolated from coal tar-contaminated sediment. Environmental Microbiology Reports 8(6): 983-992. doi: 10.1111/1758-2229.12477

Kerou M, Alves RJE, **Schleper C** (2016) Class Nitrososphaeria In: Bergey's Manual of Systematics of Archaea and Bacteria. William B. Whitman (ed.). Wiley Online Library. doi:10.1002/9781118960608.cbm00055

Kerou M, Offre P, Valledor L, **Abby S, Melcher M**, Nagler M, Weckwerth W, **Schleper C** (2016) Proteomics and comparative genomics of Nitrososphaera viennensis reveal the core genome and adaptations of archaeal ammonia oxidizers. Proceedings of the National Academy of Sciences of the United States of America 113(49): E7937-E7946. doi:10.1073/pnas.1601212113.

Kerou M, **Schleper C** (2016) Family Nitrososphaeraceae. In: Bergey's Manual of Systematics of Archaea and Bacteria. William B. Whitman (ed.). Wiley Online Library. doi:10.1002/9781118960608.fbm00265

Kerou M, **Schleper C** (2016) Genus Nitrososphaera. In: Bergey's Manual of Systematics of Archaea and Bacteria. William B. Whitman (ed.). Wiley Online Library. doi:10.1002/9781118960608.gbm01294

Kozlowski JA, Stieglmeier M, Schleper C, Klotz MG, Stein LY (2016) Pathways and key intermediates required for obligate aerobic ammonia-dependent chemolithotrophy in bacteria and Thaumarchaeota. ISME Journal 10(8): 1836-1845. doi: 10.1038/ismej.2016.2.

Leisch N, Pende N, Weber PM, Gruber-Vodicka HR, Verheul J, Vischer NO**, Abby S, Geier** B, den Blaauwen T, **Bulgheresi S** (2016) Asynchronous division by non-ring FtsZ in the gammaproteobacterial symbiont of Robbea hypermnestra. Nature Microbiology 2: 16182. doi:10.1038/nmicrobiol.2016.182.

Martin W, Weiss MC, **Neukirchen S**, Nelson-Sathi S, **Sousa F** (2016) Physiology, phylogeny, and LUCA. Microbial Cell 3(12): 451-456. doi: 10.15698/mic2016.12.545

Martin W, **Neukirchen S**, Zimorski V, Gould S, **Sousa F** (2016) Energy for two: New archaeal lineages and the origin of mitochondria. Bioessays 38(9): 850-856. doi: 10.1002/bies.201600089

Nesme J, Achouak W, Agathos S, Bailey M, Baldrian P, Brunel D, Frostegard A, Heulin T, Jansson J, Jurkevitch E, Kruus K, Kowalchuk G, Lagares A, Lappin-Scott H, Lemanceau P, Le Paslier D, Mandic-Mulec I, Murrell JC, Myrold D, Nalin R, Nannipieri P, Neufeld JD, O'Gara F, Parnell JJ, Puhler A, Pylro V, Ramos JL, Roesch L, Schloter M, **Schleper C**, Sczyrba A, Sessitsch A, Sjoling S, Sorensen J, Sorensen S, Tebbe C, Topp E, Tsiamis G, van Elsas JD, van Keulen G, Widmer F, Wagner M, Zhang T, Zhang X, Zhao L, Zhu Y-G, Vogel T, Simonet P (2016) Back to the Future of Soil Metagenomics. Frontiers in Microbiology 7:73. doi: 10.3389/fmicb.2016.00073.

Noel SJ, Hojberg O, **Urich T**, Poulsen M (2016) Draft genome sequence of Candidatus Methanomethylophilus sp. 1R26, enriched from bovine rumen; a methanogenic archaeon belonging to the Methanomassiliicoccales order. Genome announcements 4(1): e01734-15. doi:10.1128/genomeA.01734-15.

Petersen JM, Kemper A, Gruber-Vodicka H, Cardini U, van der Geest M, Kleiner M, **Bulgheresi S**, Musmann M, Herbold C, Seah B, Antony CP, Liu D, Belitz A, **Weber M** (2016) Chemosynthetic symbionts of marine invertebrate animals are capable of nitrogen fixation. Nature Microbiology 2: 16195. doi: 10.1038/nmicrobiol.2016.195.

Söllinger A, Schwab C, Weinmaier T, Loy A, Tveit AT, **Schleper C, Urich T** (2016) Phylogenetic and genomic analysis of Methanomassiliicoccales in wetlands and animal intestinal tracts reveals clade-specific habitat preferences. FEMS Microbiology Ecology 92(1):fiv149. doi:10.1093/femsec/fiv149.

Taubner RS, Rittmann SK (2016) Method for Indirect Quantification of CH4 via H2O Production Using Hydrogenotrophic Methanogens. Frontiers in Microbiology 7: 532. doi:10.3389/fmicb.2016.00532.

Weiss MC, **Neukirchen S**, Roettger M, Mrnjavac N, Nelson-Sathi S, Martin WF, **Sousa FL** (2016) Reply to 'Is LUCA a thermophilic progenote?' Nature Microbiology 1 (12): 16230. doi:10.1038/NMICROBIOL.2016.230.

Wild B, Gentsch N, Capek P, Diakova K, **Alves RJE**, Barta J, Gittel A, Hugelius G, Knoltsch A, Kuhry P, Lashchinskiy N, Mikutta R, Palmtag J, **Schleper C**, Schnecker J, Shibistova O, Takriti M, Torsvik V, **Urich T**, Watzka M, Santruckova H, Guggenberger G, Richter A (2016) Plant-derived compounds stimulate the decomposition of organic matter in arctic permafrost soils. Scientific Reports 6: 25607. doi:10.1038/srep25607.

Zebec Z, Zink IA, Kerou M, Schleper C (2016) Efficient CRISPR-Mediated Post-Transcriptional Gene Silencing in a Hyperthermophilic Archaeon Using Multiplexed crRNA Expression. G3-Genes Genomes Genetics 6(10): 3161-3168. doi: 10.1534/g3.116.032482.

2015

Bayer B, Vojvoda J, **Offre P**, **Alves RJE**, Elisabeth NH, Garcia JA, Volland JM, Srivastava A, **Schleper C**, Herndl GJ (2015) Physiological and genomic characterization of two novel marine thaumarchaeal strains indicates niche differentiation. The ISME Journal, 2015 Nov 3. [Epub ahead of print] doi:10.1038/ismej.2015.200.

Berry D, Kuzyk O, Rauch I, Heider S, **Schwab C**, Hainzl E, Decker T, Müller M, Strobl B, **Schleper C**, **Urich T**, Wagner M, Kenner L, Loy A (2015) Intestinal Microbiota Signatures Associated with Inflammation History in Mice Experiencing Recurring Colitis. Frontiers in Microbiology 6:1408. doi:10.3389/fmicb.2015.01408.

Čapek P, Diakova K, Dickopp JE, Bárta J, Wild B, Schnecker J, **Alves RJE**, **Aiglsdorfer S**, Guggenberger G, Gentsch N, Hugelius G, Lashchinskiy N, Gittel A, **Schleper C**, Mikutta R, Palmtag J, Shibistova O, Urich T, Richter A, Šantrůčková H. (2015). The effect of warming on the vulnerability of subducted organic carbon in arctic soils. Soil Biology & Biochemistry 90: 19-29. doi:10.1016/j.soilbio.2015.07.013.

Epelde L, Lanzén A, Blanco F, **Urich T**, Garbisu C (2015) Adaptation of soil microbial community structure and function to chronic metal contamination at an abandoned Pb-Zn mine. FEMS Microbiol Ecology 91(1): 1-11. doi:10.1093/femsec/fiu007.

Geisen S, Rosengarten J, Koller R, Mulder C, **Urich T**, Bonkowski M (2015) Pack Hunting by a Common Soil Amoeba on Nematodes. Environmental Microbiology, Early View. June 16. doi:10.1111/1462-2920.12949.

Geisen S, Tveit A, Clark I, Richter A, Svenning MM, Bonkowski M, **Urich T** (2015) Metatranscriptomic census of active protists in soils. The ISME Journal 9: 2178-2190. doi:10.1038/ismej.2015.30.

Gentsch N, Mikutta R, **Alves RJE**, Barta J, Capek P, Gittel A, Hugelius G, Kuhry P, Lashchinskiy N, Palmtag J, Richter A, Šantrucková H, Schnecker J, Shibistova O, **Urich T**, Wild B, Guggenberger G (2015) Storage and transformation of organic matter fractions in cryoturbated permafrost soils across the Siberian Arctic. Biogeosciences 29: 4525–4542. doi:10.5194/bgd-12-2697-2015.

Gentsch N, Mikutta R, Shibistova O, Wild B, Schnecker J, Richter A, **Urich T**, Šantrucková H, Barta J, Lashchinskiy N, Müller C, Fuß R, Guggenberger G (2015) Properties and bioavailability of particulate and mineral-associated organic matter in Arctic permafrost soils, Lower Kolyma Region, Russia. European Journal of Soil Science 66(4): 722-734. doi:10.1111/ejss.12269.

Hainzl E, Rauch I, Heider S, Berry D, **Schwab C**, Lassnig C, Loy A, **Urich T**, Wagner M, **Schleper C**, Kenner L, Decker T, Strobl B, Müller M (2015) Intestinal epithelial cell tyrosine kinase 2 transduces interleukin-22 signals to protect from acute colitis. The Journal of Immunology 195(10): 5011–5024. doi:10.4049/jimmunol.1402565.

Recuenco-Munoz L, **Offre P**, Valledor L, Lyon D, Weckwerth W, Wienkoop S (2015) Targeted quantitative analysis of a diurnal RuBisCO subunit expression and translation profile in Chlamydomonas reinhardtii introducing a novel Mass Western approach. Journal of Proteomics 113: 143-153. doi:10.1016/j.jprot.2014.09.026.

Rittmann SK (2015) A Critical Assessment of Microbiological Biogas to Biomethane Upgrading Systems. Advances in Biochemical Engineering 151: 117-35. doi:10.1007/978-3-319-21993-6_5.

Rittmann S, Lee H, Lim J, Kim T, Kang S (2014) One-carbon substrate-based biohydrogen production: Microbes, mechanism, and productivity. Biotechnology Advances 33(1): 165-177. doi:10.1016/j.biotechadv.2014.11.004.

Rittmann SK, Seifert A, Herwig C (2015) Essential prerequisites for successful bioprocess development of biological CH4 production from CO2 and H2. Critical Reviews in Biotechnology 35(2):141-51. doi:10.3109/07388551.2013.820685.

Schnecker J, Wild B, Takriti M, **Alves RJE**, Gentsch N, Gittel A, Hofer A, Klaus K, Knoltsch A, Lashchinskiy N, Mikutta R, Richter A (2015) Microbial community composition shapes enzyme patterns in topsoil and subsoil horizons along a latitudinal transect in Western Siberia. Soil Biology and Biochemistry 83: 106-115. doi:10.1016/j.soilbio.2015.01.016.

Söllinger A, Schwab C, Weinmaier T, Loy A, Tveit AT, **Schleper C**, Urich T (2015) Phylogenetic and genomic analysis of Methanomassiliicoccales in wetlands and animal intestinal tracts reveals clade-specific habitat preferences. FEMS Microbiology Ecology 92(1). doi:10.1093/femsec/fiv149.

Spang A, Saw JH, Jørgensen SL, Zaremba-Niedzwiedzka K, Martijn J, Lind AE, van Eijk R, **Schleper C**, Guy L, Ettema TJ (2015) Complex archaea that bridge the gap between prokaryotes and eukaryotes. Nature 521(7551): 173-179. doi:10.1038/nature14447.

Taubner RS, **Schleper C**, Firneis MG, **Rittmann SK** (2015) Assessing the Ecophysiology of Methanogens in the Context of Recent Astrobiological and Planetological Studies. Life (Basel) 5(4):1652-86. doi:10.3390/life5041652.

Taylor AE, Taylor K, Tennigkeit B, Palatinszky M, **Stieglmeier M**, Myrold DD, **Schleper C**, Wagner M, Bottomley PJ (2015) Inhibitory effects of c2 to c10 1-alkynes on ammonia oxidation in two nitrososphaera species. Applied and environmental microbiology 81(6): 1942-1948. doi:10.1128/AEM.03688-14.

Tveit A, **Urich T**, Frenzel P, Svenning MM (2015) Metabolic and trophic interactions modulate methane production by Arctic peat microbiota in response to warming. Proceedings of the National Academy of Sciences of the United States of America 112(19): E2507-E2516. doi:10.1073/pnas.1420797112.

Wild B, Schnecker J, Knoltsch A, Takriti M, Mooshammer M, Gentsch N, Mikutta R, **Alves RJE**, Gittel A, Lashchinskiy N, Richter A (2015) Microbial nitrogen dynamics in organic and mineral soil horizons along a latitudinal transect in Western Siberia. Global Biogeochemical Cycles 29: 567–582. doi:10.1002/2015GB005084.

Yang K, Park CG, Cheong C, **Bulgheresi S**, Zhang S, Zhang P, He Y, Jiang L, Huang H, Ding H, Wu Y, Wang S, Zhang L, Li A, Xia L, Bartra SS, Plano GV, Skurnik M, Klena JD, Chen T (2015) Host Langerin (CD207) is a receptor for Yersinia pestis phagocytosis and promotes dissemination. Immunology & Cell Biology 93(9): 815-24. doi:10.1038/icb.2015.46.

2014

Gittel A, Barta J, Lacmanova I, Schnecker J, Wild B, Capek P, Kaiser C, Torsvik V, Richter A, **Schleper C, Urich T** (2014) Site- and horizon-specific pattern of microbial community structure and enzyme

activities in permafrost-affected soils of Greenland. Frontiers in Microbiology - Terrestrial Microbiology 5:541. doi:10.3389/fmicb.2014.00541.

Gittel A, Bárta J, Kohoutová I, Mikutta R, Owens S, Gilbert J, Schnecker J, Wild B, Hannisdal B, März J, Lashchinskiy N, Èapek P, Šantrùèková H, Gentsch N, Shibistova O, Guggenberger G, Richter A, Torsvik V, **Schleper C**, **Urich T** (2014) Distinct microbial communities associated with buried soils in the Siberian tundra. ISME Journal 8: 841-853. doi:10.1038/ismej.2013.219.

Hanak AM, Nagler M, Weinmaier T, Sun X, Fragner L, **Schwab C**, Rattei T, Ulrich K, Ewald D, Engel M, Schloter M, **Bittner R**, **Schleper C**, Weckwerth W (2014) Draft Genome Sequence of the Growth-Promoting Endophyte Paenibacillus sp. P22, Isolated from Populus. Genome Announcements. March/April 2014 2(2): e00276-14. doi:10.1128/genomeA.00276-14.

Offre P, Kerou M, Spang A, **Schleper C** (2014) Variability of the transporter gene complement in ammonia-oxidizing archaea. Trends in Microbiology 22(12): 665-675. doi:10.1016/j.tim.2014.07.007.

Pende N, Leisch N, Gruber-Vodicka H, Heindl N, Ott J, den Blaauwen T, **Bulgheresi S** (2014) Size-independent symmetric division in extraordinarily long cells. Nature Communications 5: 4803. doi:10.1038/ncomms5803.

Petersen S, Højberg O, Poulsen M, **Schwab C**, Eriksen J (2014) Methanogenic community changes, and emissions of methane and other gases, during storage of acidified and untreated pig slurry. Journal of Applied Microbiology 117(1): 160-172. doi:10.1111/jam.12498.

Prommer J, Wanek W, Hofhansl F, **Trojan D**, **Offre P**, **Urich T**, **Schleper C**, Sassmann S, Kitzler B, Soja G, Hood-Nowotny R (2014) Biochar Decelerates Soil Organic Nitrogen Cycling but Stimulates Soil Nitrification in a Temperate Arable Field Trial. PLOS One 9(1): e86388. doi:10.1371/journal.pone.0086388.

Rauch I, Hainzl E, Rosebrock F, Heider S, **Schwab C**, Berry D, Stoiber D, Wagner M, **Schleper C**, Loy A, **Urich T**, Müller M, Strobl B, Kenner L, Decker T (2014) Type I interferons have opposing effects during the emergence and recovery phases of colitis. European Journal of Immunology 44(9): 2749-2760. doi:10.1002/eji.201344401.

Recuenco-Muñoz L, **Offre P**, Valledor L, Lyon D, Weckwerth W, Wienkoop S (2014) Targeted quantitative analysis of a diurnal RuBisCO subunit expression and translation profile in Chlamydomonas reinhardtii introducing a novel Mass Western approach. Journal of Proteomics. doi: 10.1016/j.jprot.2014.09.026.

Rittmann SKR, Lee H, Lim J, Kim T, Kang S (2014) One-carbon substrate-based biohydrogen production: Microbes, mechanism, and productivity. Biotechnology Advances 33(1): 165-177. doi: 10.1016/j.biotechadv.2014.11.004.

Rittmann SKR, Holubar P (2014) Rapid extraction of total RNA from an anaerobic sludge biocoenosis. Folia Microbiologica: 127-132. doi:10.1007/s12223-013-0274-2.

Schnecker J, Wild B, Hofhansl F, **Alves R**, Bárta J, Èapek P, Fuchslueger L, Gentsch N, Gittel A, Guggenberger G, Hofer A, Kienzl S, Knoltsch A, Lashchinskiy N, Mikutta R, Šantrùèková H, Shibistova O, Takriti M, **Urich T**, Weltin G, Richter A (2014) Effects of Soil Organic Matter Properties and Microbial Community Composition on Enzyme Activities in Cryoturbated Arctic Soils. PLoS One 9(4): e94076. doi:10.1371/journal.pone.0094076.

Stieglmeier M, **Alves R**, **Schleper C** (2014) The Phylum Thaumarchaeota. In: The Prokaryotes - Other Major Lineages of Bacteria and The Archaea. Rosenberg, E., DeLong E.F., Lory, S.,

Stackebrandt, E., Thompson F. (Eds.) 4th ed. 2014 Springer-Verlag Berlin Heidelberg. doi:10.1007/978-3-642-38954-2_338.

Stieglmeier M, Klingl A, **Alves RJ**, **Rittmann SK**, **Melcher M**, **Leisch N**, **Schleper C** (2014) Nitrosophaera viennensis sp. nov., an aerobic and mesophilic ammonia-oxidizing archaeon from soil and member of the archaeal phylum Thaumarchaeota. International Journal of Systematic and Ecolutionary Microbiology 64(Pt 8): 2738-2752. doi:10.1099/ijs.0.063172-0.

Stieglmeier M, Mooshammer M, Kitzler B, Wanek W, Zechmeister-Boltenstern S, Richter A, **Schleper C** (2014) Aerobic nitrous oxide production through N-nitrosating hybrid formation in ammonia-oxidizing archaea. ISME Journal 8(5): 1135-1146. doi:10.1038/ismej.2013.220.

Schwab C, Berry D, Rauch I, **Rennisch I**, Ramesmayer J, Hainzl E, Heider S, Decker T, Kenner L, Müller M, Strobl B, Wagner M, **Schleper C**, Loy A, **Urich T** (2014) Longitudinal study of murine microbiota activity and interactions with the host during acute inflammation and recovery. ISME Journal 8: 1101-1114. doi:10.1038/ismej.2013.223.

Schwab C, Tveit A, **Schleper C**, **Urich T** (2014) Gene expression of lactobacilli in murine forestomach biofilms. Microbial Biotechnology 7(4): 347-359. doi:10.1111/1751-7915.12126.

Tveit A, **Urich T**, Svenning MM (2014) Metatranscriptomic analysis of Arctic peat soil microbiota. Applied and Environmental Microbiology 80(18): 5761. doi:10.1128/AEM.01030-14.

Urich T, Lanzén A, Stokke R, Bayer C, Pedersen RB, Thorseth I, **Schleper C**, Steen IH, Øvreas L (2014) Microbial community structure and functioning in marine sediments associated with diffuse hydrothermal venting assessed by integrated meta-omics. Environmental Microbiology 16(9): 2699-2710. doi:10.1111/1462-2920.12283.

Wild B, Schnecker J, **Alves R**, Barsukov P, Bárta J, Èapek P, Gentsch N, Gittel A, Guggenberger G, Lashchinskiy N, Mikutta R, Rusalimova O, Šantrùèková H, Shibistova O, **Urich T**, Watzka M, Zrazhevskaya G, Richter A (2014) Input of easily available organic C and N stimulates microbial decomposition of soil organic matter in arctic permafrost soil. Soil Biology & Biochemistry 75: 143-151. doi:10.1016/j.soilbio.2014.04.014.

Wilhelm L, Besember K, Fasching C, **Urich T**, Singer GA, Quince C, Battin TJ (2014) Rare but active taxa contribute to community dynamics of benthic biofilms in glacier-fed streams. Environmental Microbiology 16(8): 2514-2524. doi:10.1111/1462-2920.12392.

Zebec Z, **Manica A**, Zhang J, White M, **Schleper C** (2014) CRISPR-mediated targeted mRNA degradation in the archaeon Sulfolobus solfataricus. Nucleic Acids Research 42(8):5280-5288. doi:10.1093/nar/gku161.

2013

Albers SV, Forterre P, Pranighvili D, **Schleper C** (2013) The legacy of Carl Woese and Wolfram Zillig: from phylogeny to landmark discoveries. Nature Reviews Microbiology 11: 713-719. doi:10.1038/nrmicro3124

Alves RJ, Wanek W, **Zappe A**, Richter A, Svenning MM, **Schleper C, Urich T** (2013) Nitrification rates in Arctic soils are associated with functionally distinct populations of ammonia-oxidizing archaea. ISME Journal 7(8): 1620-1631. doi:10.1038/ismej.2013.35.

Eme L, Reigstad LJ, **Spang A**, Lanzén A, Weinmaier T, Rattei T, **Schleper C**, Brochier-Armanet C (2013) Metagenomics of Kamchatkan hot spring filaments reveal two new major(hyper)thermophilic lineages related to Thaumarchaeota. Research in Microbiology 164: 425-438. doi:pii: S0923-2508(13)00027-2. 10.1016/j.resmic.2013.02.006.

Gittel A, Bárta J, Kohoutová I, Mikutta R, Owens S, Gilbert J, Schnecker J, Wild B, Hannisdal B, März J, Lashchinskiy N, Čapek P, Šantrůčková H, Gentsch N, Shibistova O, Guggenberger G, Richter A, Torsvik V, **Schleper C**, **Urich T** (2013) Distinct microbial communities associated with buried soils in the Siberian tundra. ISME Journal 8(4), 841-853. doi:10.1038/ismej.2013.219

Jorgensen S, Thorseth I, Pedersen R, Baumberger T, **Schleper C** (2013) Quantitative and phylogenetic study of the Deep Sea Archaeal Group in sediments of the Arctic mid-ocean spreading ridge. Frontiers in Microbiology 4: 299. doi:10.3389/fmicb.2013.00299

Märtens B, Manoharadas S, Hasenöhrl D, **Manica A**, Bläsi U (2013) Antisense regulation by transposon-derived RNAs in the hyperthermophilic archaeon Sulfolobus solfataricus. Embo Reports 14(6): 527-533. doi:10.1038/embor.2013.47

Manica A, Schleper C (2013) CRISPR-mediated defense mechanisms in the hyperthermophilic archaeal genus Sulfolobus. RNA Biology 10(5): 671-678. doi:10.4161/rna.24154.

Manica A, Zebec Z, Steinkellner J, Schleper C (2013) Unexpectedly broad target recognition of the CRISPR-mediated virus defence system in the archaeon Sulfolobus solfataricus. Nucleic Acids Research 41(22): 10509-10517. doi:10.1093/nar/gkt767.

Moissl-Eichinger C, Pukall R, Probst A, **Stieglmeier M**, Schwendner P, Mora M, Barczyk S, Bohmeier M, Rettberg P (2013) Lessons Learned from the microbial analysis of the Herschel spacecraft during assembly, integration and testing operations. Astrobiology 13(12): 1125-1139. doi:10.1089/ast.2013.1024

Offre P, Spang A, Schleper C (2013) Archaea in Biogeochemical Cycles. Annual Review of Microbiology 67: 437-457. doi:10.1146/annurev-micro-092412-155614

Poulsen M, **Schwab C**, Jensen B, Engberg R, **Spang A**, Canibe N, Højberg O, **Milinovich G**, Fragner L, **Schleper C**, Weckwerth W, Lund P, Schramm A, **Urich T** (2013) Methylotrophic methanogenic Thermoplasmata implicated in reduced methane emissions from bovine rumen. nature communications 4:1428. doi:10.1038/ncomms2432.

Shen T, Stieglmeier M, Dai J, **Urich T, Schleper C** (2013) Responses of the terrestrial ammonia oxidizing archaeon Ca. Nitrososphaera viennensis and the ammonia oxidizing bacterium Nitrosospira multiformis to nitrification inhibitors. FEMS Microbiology Letters 344(2):121-129. doi:10.1111/1574-6968.12164.

Tveit A, Schwacke R, Svenning MM, **Urich T** (2013) Organic carbon transformations in high-Arctic peat soils: Key functions and microorganisms. The ISME Journal 7(2): 299-311. doi:10.1038/ismej.2012.99

Urich T, Lanzén A, Stokke R, Bayer C, Pedersen RB, Thorseth I, **Schleper C**, Steen IH, Øvreas L (2013) Microbial community structure and functioning in marine sediments associated with diffuse hydrothermal venting assessed by integrated meta-omics. Environmental Microbiology 16(9), 2699-2710. doi: 10.1111/1462-2920.12283

Vissers EW, Anselmetti FS, Bodelier PL, Muyzer G, **Schleper C**, Tourna M, Laanbroek HJ (2013) Temporal and Spatial Coexistence of Archaeal and Bacterial amoA Genes and Gene Transcripts in Lake Lucerne. Archaea - An International Microbiological Journal 2013: 289478; doi:10.1155/2013/289478.

Vissers EW, Blaga CI, Bodelier PL, Muyzer G, **Schleper C**, Sinninghe Damsté JS, **Tourna M**, Laanbroek HJ (2013) Seasonal and vertical distribution of putative ammonia-oxidizing thaumarchaeotal communities in an oligotrophic lake. FEMS Microbiology Ecology 83(2): 515-526. doi:10.1111/1574-6941.12013.

Wild B, Schnecker J, Bárta J, Capek P, Guggenberger G, Hofhansl F, Hugelius G, Kaiser C, Kuhry P, Lashchinsky N, Mikutta C, Mooshammer M, Palmtag J, Šantrucková H, Shibistova O, **Urich T**, Zimov SA, Richter A (2013) From proteins to nitrate: Nitrogen dynamics in organic, cryoturbated and mineral horizons of tundra soil. Soil Biology and Biochemistry 67(100): 85-93. doi:10.5194/bg-12-4525-2015

2012

Bartossek R, Spang A, Weidler G, Lanzen A, **Schleper C** (2012) Metagenomic analysis of ammonia-oxidizing archaea affiliated with the soil group. Frontiers in Microbiology 3: 208. doi:10.3389/fmicb.2012.00208.

Berry D, **Schwab C, Milinovich G**, Reichert J, Ben Mahfoudh K, Decker T, Engel M, Hai B, Hainzl E, Heider S, Kenner L, Müller M, Rauch I, Strobl B, Wagner M, **Schleper C, Urich T**, Loy A (2012) Phylotype-level 16S rRNA analysis reveals new bacterial indicators of health state in acute murine colitis. ISME Journal 6(11): 2091-2106. doi:10.1038/ismej.2012.39.

Dirks U, Gruber-Vodicka H, **Leisch N, Bulgheresi S**, Egger, B, Ladurner P, Ott J (2012) Bacterial Symbiosis Maintenance in the Asexually Reproducing and Regenerating Flatworm Paracatenula galateia. PLoS ONE 7(4): e34709. doi:10.1371/journal.pone.0034709

Jørgensen S, Hannisdal B, Lanzen A, Baumberger T, Flesland K, Fonseca R, Ovreas L, Steen IH, Torseth IH, Pedersen RB, **Schleper C** (2012) Correlating microbial community profiles with geochemical data in highly stratified sediments from the Arctic Mid-Ocean Ridge. Proceedings of the National Academy of Sciences of the United States of America. 109(42): E2846-E2855. doi:10.1073/pnas.1207574109.

Leisch N, Verheul J, **Heindl NR**, Gruber-Vodicka HR, **Pende N**, den Blaauwen T, **Bulgheresi S** (2012) Growth in width and FtsZ ring longitudinal positioning in a gammaproteobacterial symbiont. Current Biology 22(19): R831-832. doi:10.1016/j.cub.2012.08.033

Lanzèn A, Jørgensen SL, Huson DH, Garfer M, Grindhaug SH, Jonassen I, Øvreås L, **Urich T** (2012): CREST – Classification Resources for environmental Sequence Tags, PLOS One 7:e49334. doi:10.1371/journal.pone.0049334.

Murfin K, Dillman A, Foster J, **Bulgheresi S**, Slatko B, Sternberg P, Goodrich-Blair H (2012) Nematode-Bacterium Symbioses-Cooperation and Conflict Revealed in the "Omics" Age. Biological Bulletin 223(1): 85-102. doi:10.1086/BBLv223n1p85

Radax R, Hoffmann F, Rapp HT, Leininger S, **Schleper C** (2012) Ammonia-oxidizing archaea as main drivers of nitrification in cold-water sponges. Environmental Microbiology 14(4): 909-923. doi:10.1111/j.1462-2920.2011.02661.x.

Radax R, Rattei T, Lanzen A, Bayer C, Rapp HT, **Urich T, Schleper C** (2012) Metatranscriptomics of the marine sponge Geodia barretti: tackling phylogeny and function of its microbial community. Environmental Microbiology. 14(5): 1308-1324. doi:10.1111/j.1462-2920.2012.02714.x.

Sinninghe Damsté JS, Rijpstra WI, Hopmans EC, Jung MY, Kim JG, Rhee SK, **Stieglmeier M, Schleper C** (2012) Intact polar and core glycerol dibiphytanyl glycerol tetraether lipids of group I.1a and I.1b thaumarchaeota in soil. Applied and Environmental Microbiology 78(19): 6866-6874. doi:10.1128/AEM.01681-12

Spang A, Poehlein A, **Offre P**, Zumbrägel S, Haider S, Rychlik N, Nowka B, Schmeisser C, Lebedeva EV, Rattei T, Böhm C, Schmid M, Galushko A, Hatzenpichler R, Weinmaier T, Daniel R, **Schleper C**, Spieck E, Streit W, Wagner M (2012) The genome of the ammonia-oxidizing Candidatus Nitrosopshaera gargensis: Insights into metabolic versatility and environmental adaptations. Environmental Microbiology 14(12): 3122-3145. doi:10.1111/j.1462-2920.2012.02893.x.

Tveit A, Schwacke R, Svenning MM, **Urich T** (2012) Organic carbon transformations in high-Arctic peat soils: key functions and microorganisms. ISME Journal 7(2): 299-311. doi:10.1038/ismej.2012.99.

2011

Ajon M, **Fröls S**, van Wolferen M, Stoecker K, **Teichmann D**, Driessen AJM, Grogan DW, Albers SV, **Schleper C** (2011) UV-inducible DNA exchange in hyperthermophilic archaea mediated by type IV pili. Molecular Microbiology 82(4): 807-817. doi:10.1111/j.1365-2958.2011.07861.x

Bulgheresi S (2011) Calling the roll on Laxus oneistus immune defense molecules. Symbiosis. 2011 Nov; 55(3):127-135. doi:10.1007/s13199-012-0157-3

Bulgheresi S, Gruber-Vodicka HR, **Heindl NR**, Dirks U, Kostadinova M, Breiteneder H, Ott JA (2011) Sequence variability of the pattern recognition receptor Mermaid mediates specificity of marine nematode symbioses. ISME Journal 5(6): 986-998. doi:10.1038/ismej.2010.198

Gruber-Vodicka HR, Dirks U, **Leisch N**, Baranyi C, Stoecker K, **Bulgheresi S, Heindl NR**, Horn M, Lott C, Loy A, Wagner M, Ott, J (2011) Paracatenula, an ancient symbiosis between thiotrophic Alphaproteobacteria and catenulid flatworms. Proceedings of the National Academy of Sciences of the United States of America 108(29):12078-12083. doi:10.1073/pnas.1105347108

Heindl NR, Gruber-Vodicka HR, Bayer C, Luecker S, Ott JA, **Bulgheresi S** (2011) First detection of thiotrophic symbiont phylotypes in the pelagic marine environment. FEMS Microbiology Ecology 77 (1): 223-227. doi:10.1111/j.1574-6941.2011.01096.x

Krupovic M, **Spang A**, Gribaldo S, Forterre P, **Schleper C** (2011) A thaumarchaeal provirus testifies for an ancient association of tailed viruses with archaea. Biochemical Society Transactions 39(1): 82-88. doi:10.1042/BST0390082

Lanzén A, Jorgensen SL, Bengtsson MM, Jonassen I, Ovreas L, **Urich T** (2011) Exploring the composition and diversity of microbial communities at the Jan Mayen hydrothermal vent field using RNA and DNA. FEMS Microbiology Ecology 77(3): 577-89. doi:10.1111/j.1574-6941.2011.01138.x

Manica A, Zebec Z, Teichmann D, Schleper C (2011) In vivo activity of CRISPR-mediated virus defence in a hyperthermophilic archaeon. Molecular Microbiology 80(2): 481-491. doi:10.1111/j.1365-2958.2011.07586.x

Mitra S, Rupek P, Richter DC, **Urich T**, Gilbert JA, Meyer F, Wilke A, Huson DH (2011) Functional analysis of metagenomes and metatranscriptomes using SEED and KEGG. BMC Bioinformatics. 2011 Feb 15; 12 Suppl 1:S21. doi:10.1186/1471-2105-12-S1-S21

Pester M, **Schleper C**, Wagner M (2011) The Thaumarchaeota: an emerging view of their phylogeny and ecophysiology. Current Opinion in Microbiology 14(3): 300-306. doi:10.1016/j.mib.2011.04.007

Reeve JN, **Schleper C** (2011) Archaea: very diverse, often different but never bad?Current Opinion in Microbiology 14(3): 271-273. doi:10.1016/j.mib.2011.04.011

Reigstad LJ, Bartossek R, Schleper C (2011) Preparation of high-molecular weight DNA and metagenomic libraries from soils and hot springs. Methods in Enzymology 496:319-344. doi:10.1016/B978-0-12-386489-5.00013-0

Reigstad LJ, Jorgensen SL, Lauritzen SE, **Schleper C, Urich T** (2011) Sulfur-oxidizing chemolithotrophic proteobacteria dominate the microbiota in high arctic thermal springs on svalbard. Astrobiology 11(7): 665-678. doi:10.1089/ast.2010.0551

Schmitz-Esser S, Penz T, **Spang A**, Horn M (2011) A bacterial genome in transition – An exceptional enrichment of IS elements but lack of evidence for recent transposition in the symbiont Amoebophilus asiaticus. BMC Bioinformatics 11(1) Article number 270. doi:10.1186/1471-2148-11-270

Svenning MM, Hestnes AG, Wartiainen I, Stein, LY, Klotz MG, Kalyuzhnaya MG, **Spang A**, Bringel F, Vuilleumier S, Lajus A, Médigue C, Bruce DC, Cheng JF, Goodwin L, Ivanova N, Han J, Han CS, Hauser L, Held B, Land ML, Lapidus A, Lucas S, Nolan M, Pitluck S, Woyke T (2011) Genome Sequence of the Arctic Methanotroph Methylobacter tundripaludum SV96. Journal of Bacteriology 193(22):6418-6419. doi:10.1128/JB.05380-11

Tourna M, Stieglmeier M, Spang A, Könneke M, Schintlmeister A, **Urich T**, Engel M, Schloter M, Wagner M, Richter A, **Schleper C** (2011) Nitrososphaera viennensis, an ammonia oxidizing archaeon from soil. Proceedings of the National Academy of Sciences of the United States of America 108(20): 8420-8425. doi:10.1073/pnas.1013488108

Veith A, **Urich T**, Seyfarth K, Protze J, Frazão C and Kletzin A (2011) Substrate pathways and mechanisms of inhibition in the sulfur oxygenase reductase of Acidianus ambivalens. Front. Microbio. 2:37. doi: 10.3389/fmicb.2011.00037. doi:10.3389/fmicb.2011.00037

2010

Bartossek R, Nicol GW, Lanzen A, Klenk HP, **Schleper C** (2010) Homologues of nitrite reductases in ammonia-oxidizing archaea: diversity and genomic context. Environ Microbiology 12(4): 1075-1088. doi:10.1111/j.1462-2920.2010.02153.x

Bright M, **Bulgheresi S** (2010) Microbial symbiont transmission. Nature Reviews Microbiology 8(3): 218-230. doi:10.1038/nrmicro2262

Bright M, **Bulgheresi S** (2010) A complex journey: transmission of microbioal symbionts. Nature Reviews Microbiology 8(3): 218-230. doi:10.1038/nrmicro2262

Milinovich GJ, Klieve AV, Pollitt CC, Trott DJ (2010) Microbial Events in the Hindgut During Carbohydrate-induced Equine Laminitis. Veterinary Clinics of North America - Equine Practice 26(1): 79-94. doi:10.1016/j.cveq.2010.01.007

Rae RG, **Tourna M**, Wilson MJ (2010) The slug parasitic nematode Phasmarhabditis hermaphrodita associates with complex and variable bacterial assemblages that do not affect its virulence. Journal of Invertebrate Pathology 104(3): 222-226. doi:10.1016/j.jip.2010.04.008

Reigstad LH, Jorgensen SL, **Schleper C** (2010) Diversity and abundance of Korarchaeota in terrestrial hot springs of Iceland and Kamchatka. ISME Journal 4(3): 346-356. doi:10.1038/ismej.2009.126

Schleper C (2010) Ammonia oxidation: different niches for bacteria and archaea? ISME Journal 4(9): 1092-1094. doi:10.1038/ismej.2010.111

Schleper C, Nicol GW (2010) Ammonia-oxidising archaea-physiology, ecology and evolution. Advances in Microbial Physiology 57: 1-47. doi:10.1016/B978-0-12-381045-8.00001-1

Spang A, Hatzenpichler R, Brochier-Armanet C, Rattei T, Tischler P, Spieck E, Streit W, Stahl DA, Wagner M, **Schleper C** (2010) Distinct gene set in two different lineages of ammonia-oxidizing archaea supports the phylum Thaumarchaeota. Trends in Microbiology 18(8): 331-340. doi:10.1016/j.tim.2010.06.003

Tourna M, Freitag TE, Prosser JI (2010) Stable isotope probing analysis of interactions between ammonia oxidizers. Applied and Environmental Microbiology 76(8): 2468-2477. doi:10.1128/AEM.01964-09

Zhang LM, **Offre PR**, He JZ, Verhamme DT, Nicol GW, Prosser JI (2010) Autotrophic ammonia oxidation by soil thaumarchaea. Proceedings of the National Academy of Sciences of the United States of America 107(40): 17240-17245. doi:10.1073/pnas.1004947107

2009

Albers SV, Birkeland NK, Driessen AJ, Gertig S, Haferkamp P, Klenk HP, Kouril T, **Manica A**, Pham TK, Ruoff P, **Schleper C,** Schomburg D, Sharkey KJ, Siebers B, Sierocinski P, Steuer R, van der Oost J, Westerhoff HV, Wieloch P, Wright PC, Zaparty M SulfoSYS (Sulfolobus Systems Biology) (2009) Towards a silicon cell model for the central carbohydrate metabolism of the archaeon Sulfolobus solfataricus under temperature variation. Biochemical Society Transactions 37(Pt 1): 58-64. doi:10.1042/BST0370058

Bayer C, Heindl NR, Rinke C, Lücker S, Ott JA, **Bulgheresi S** (2009) Molecular characterization of the symbionts associated with marine nematodes of the genus Robbea. Environmental Microbiology reports 1(2): 136-144. doi:10.1111/j.1758-2229.2009.00019.x

Fröls S, White MF, **Schleper C** (2009) Reactions to UV damage in the model archaeon Sulfolobus solfataricus. Biochemical Society Transactions 37(Pt 1): 36-41. Review. doi:10.1042/BST0370036

Hoffmann F, **Radax R**, Woebken D, Holtappels M, Lavik G, Rapp HT, Schläppy ML, **Schleper C**, Kuypers MM (2009) Complex nitrogen cycling in the sponge Geodia barretti. Environmental Microbiology 11(9): 2228-2243. doi:10.1111/j.1462-2920.2009.01944.x

Mittal R, **Bulgheresi S**, Emami C, Prasadarao NV (2009) Enterobacter sakazakii targets DC-SIGN to induce immunosuppressive responses in dendritic cells by modulating MAP kinases. The Journal of Immunology. 183(10): 6588-6599. doi:10.4049/jimmunol.0902029

Redder P, Peng X, Brügger K, Shah SA, Roesch F, Greve B, She Q, **Schleper C**, Forterre P, Garrett RA, Prangishvili D (2009) Four newly isolated fuselloviruses from extreme geothermal environments reveal unusual morphologies and a possible interviral recombination mechanism. Environmental Microbiology 11(11): 2849-2862. doi:10.1111/j.1462-2920.2009.02009.x

Schauss K, Focks A, Leininger S, Kotzerke A, Heuer H, Thiele-Bruhn S, Sharma S, Wilke BM, Matthies M, Smalla K, Munch JC, Amelung W, Kaupenjohann M, Schloter M, **Schleper C** (2009) Dynamics and functional relevance of ammonia-oxidizing archaea in two agricultural soils. Environmental Microbiology 11(2): 446-456. doi:10.1111/j.1462-2920.2008.01783.x

Zaparty M, Esser D, Gertig S, Haferkamp P, Kouril T, **Manica A**, Pham TK, Reimann J, Schreiber K, Sierocinski P, **Teichmann D**, van Wolferen M, von Jan M, Wieloch P, Albers SV, Driessen AJ, Klenk HP, **Schleper C**, Schomburg D, van der Oost J, Wright PC, Siebers B (2009) "Hot standards" for the thermoacidophilic archaeon Sulfolobus solfataricus. Extremophiles 14(1): 119-142. doi:10.1007/s00792-009-0280-0

2008

Fröls S, Ajon M, Wagner M, **Teichmann D**, Zolghadr B, Folea M, Boekema, Driessen AJM, **Schleper C**, Albers SV (2008) UV-inducible cellular aggregation of the hyperthermophilic archaeon Sulfolobus solfataricus is mediated by pili formation. Molecular Microbiololy 70(4): 938-52. doi:0.1111/j.1365-2958.2008.06459.x

Nabatov AA, de Jong MAWP, de Witte L, **Bulgheresi S**, Geijtenbeek THB (2008) C-type lectin Mermaid inhibits dendritic cell mediated Hiv-1 transmission to CD4+ T cell. Virology. 378(2): 323-328. doi:10.1016/j.virol.2008.05.025

Nicol GW, Leininger S, **Schleper C**, Prosser JI (2008) The influence of soil pH on the diversity, abundance and transcriptional activity of ammonia oxidizing archaea and bacteria. Environmental Microbiology 10(11): 2966-2978. doi:10.1111/j.1462-2920.2008.01701.x

Perevalova AA, Kolganova TV, Birkeland NK, **Schleper C**, Bonch-Osmolovskaya EA, Lebedinsky AV (2008) Distribution of Crenarchaeota representatives in terrestrial hot springs of Russia and Iceland. Applied and Environmental Microbiology 74(24): 7620-7628. doi:10.1128/AEM.00972-08

Reigstad LJ, Richter A, Daims H, **Urich T**, Schwark L, **Schleper C** (2008) Nitrification in terrestrial hot springs of Iceland and Kamchatka. FEMS Microbiology Ecology 64(2): 167-174. doi:10.1111/j.1574-6941.2008.00466.x

Schleper C (2008) Microbial ecology: Metabolism of the deep. Nature 456(7223): 712-714. doi:10.1038/456712a

Tourna M, Freitag TE, Nicol GW, Prosser JI (2008) Growth, activity and temperature responses of ammonia-oxidizing archaea and bacteria in soil microcosms. Environmental Microbiology 10(5): 1357-1364. doi:10.1111/j.1462-2920.2007.01563.x

Urich T, Lanzén A, Qi J, Huson DH, **Schleper C**, Schuster SC (2008) Simultaneous assessment of soil microbial community structure and function through analysis of the meta-transcriptome. PLoS ONE 3(6): e2527. doi:10.1371/journal.pone.0002527

Zhang P, Skurnik M, Zhang S, Schwartz O, Kalyanasundaram R, **Bulgheresi S**, He JJ, Klena JD, Hinnebusch B, Chen T (2008) Human dendritic cell-specific intercellular adhesion molecule-grabbing nonintegrin (CD209) is a receptor for Yersinia pestis that promotes phagocytosis by dendritic cells. Infection and Immunity 76(5): 2070-2079. doi:10.1128/IAI.01246-07

2007

Fröls S, Gordon PM, Panlilio MA, Duggin ID, Bell SD, Sensen CW, **Schleper C** (2007) Response of the hyperthermophilic Archaeon Sulfolobus solfataricus to UV damage. Journal of Bacteriology 189: 8708-8718. doi:10.1128/JB.01016-07

Fröls S, Gordon PM, Panlilio MA, **Schleper C**, Sensen CW (2007) Elucidating the transcription cycle of the UV-inducible hyperthermophilic archaeal virus SSV1 by DNA microarrays. Virology 365: 48-59. doi:10.1016/j.virol.2007.03.033