

Full List of Peer-reviewed articles

135. Melcher M, Hodgskiss LH, Mardini MA, Schleper C, Rittmann SK-MR (2023) Analysis of biomass productivity and physiology of *Nitrososphaera viennensis* grown in continuous culture. **Frontiers in Microbiology** 14:1076342. DOI: 10.3389/fmicb.2023.1076342
134. Hodgskiss LH, Melcher M, Kerou M, Chen W, Ponce-Toledo RI, Savvides SN, Wienkoop S, Hartl M, Schleper C (2023) Unexpected complexity of the ammonia monooxygenase in archaea. **ISME Journal** 17:588–599. DOI: 10.1038/s41396-023-01367-3
133. Rodrigues-Oliveira T, Wollweber F, Ponce-Toledo RI, Xu J, Rittmann SKR, Klingl A, Pilhofer M, Schleper C (2023) Actin cytoskeleton and complex cell architecture in an Asgard archaeon. **Nature** 613(7943):332-339. DOI: 10.1038/s41586-022-05550-Y.
132. Pfeifer K, Ehmoser EK, Rittmann SKR, Schleper C, Pum D, Sleytr UB, Schuster B (2022) Isolation and Characterization of Cell Envelope Fragments Comprising Archaeal S-Layer Proteins. **Nanomaterials (Basel)** 12(14):2502. DOI: 10.3390/nano12142502.
131. Grau-Bové X, Navarrete C, Chiva C, Pribasnig T, Antó M, Torruella G, Galindo LJ, Lang BF, Moreira D, López-García P, Ruiz-Trillo I, Schleper C, Sabidó E, Sebé-Pedrós A (2022) A phylogenetic and proteomic reconstruction of eukaryotic chromatin evolution. **Nature Ecology and Evolution** 6(7):1007-1023. DOI: 10.1038/s41559-022-01771-6.
130. Wimmer E, Zink I, Schleper C (2022) Reprogramming CRISPR-Mediated RNA Interference for Silencing of Essential Genes in Sulfolobales. **Methods in Molecular Biology** 2522:177-201. DOI: 10.1007/978-1-0716-2445-6_11.
129. Zink I, Fouqueau T, Tarrason Risa G, Werner F, Baum B, Bläsi U, Schleper C (2021) Comparative CRISPR type III-based knockdown of essential genes in hyperthermophilic Sulfolobales and the evasion of lethal gene silencing. **RNA Biology** 18(3): 421-434. DOI: 10.1080/15476286.2020.1813411.
128. Wang H, Bagnoud A, Ponce-Toledo RI, Kerou M, Weil M, Schleper C, Urich T (2021) Linking 16S rRNA Gene Classification to *amoA* Gene Taxonomy Reveals Environmental Distribution of Ammonia-Oxidizing Archaeal Clades in Peatland Soils. **mSystems** e0054621, [31.08.2021]. DOI: 10.1128/mSystems.00546-21
127. Kerou M, Ponce-Toledo RI, Zhao R, Abby SS, Hirai M, Nomaki H, Takaki Y, Nunoura T, Jørgensen SL, Schleper C (2021) Genomes of Traumarchaeota from deep sea sediments reveal specific adaptations of three independently evolved lineages. **The ISME Journal** 1-17. DOI: 10.1038/s41396-021-00962-6
126. Zhao R, Mogollon JM, Abby S, Schleper C, Biddle JF, Roerdink DL, Thorseth IH, Joergensen SL (2020) Geochemical transition zone powering microbial growth in subsurface sediments. **Proceedings of the National Academy of Sciences of the United States of America** 117(51): 32617-32626. DOI: 10.1073/pnas.2005917117
125. Zink IA, Wimmer E, Schleper C (2020) Heavily Armed Ancestors: CRISPR Immunity and Applications in Archaea with a Comparative Analysis of CRISPR Types in *Sulfolobales*. **Biomolecules** 10(11): 1523. DOI: 10.3390/biom10111523
124. Abby SS, Kerou M, Schleper C (2020) Ancestral Reconstructions Decipher Major

- Adaptations of Ammonia-Oxidizing Archaea upon Radiation into Moderate Terrestrial and Marine Environments. *mBio* 11(5): e02371-20. DOI: 10.1128/mBio.02371-20
123. Zink I, Fouqueau T, Tarrason Risa G, Werner F, Baum B, Bläsi U, Schleper C (2020) Comparative CRISPR type III-based knockdown of essential genes in hyperthermophilic *Sulfolobales* and the evasion of lethal gene silencing. **RNA Biology** [ePub: 21 Sep 2020]. DOI: 10.1080/15476286.2020.1813411.
122. Reyes C, Hodgskiss L, Kerou M, Pribasniig T, Abby SS, Bayer B, Kraemer S, Schleper C (2020) Genome wide transcriptomic analysis of the soil ammonia oxidizing archaeon *Nitrososphaera viennensis* upon exposure to copper limitation. **The ISME Journal** 14(11): 2659-2674. DOI: 10.1038/s41396-020-0715-2.
121. Reyes C, Hodgskiss L, Baars O, Kerou M, Bayer B, Schleper C, Kraemer S (2020) Copper limiting threshold in the terrestrial ammonia oxidizing archaeon *Nitrososphaera viennensis*. **Research in Microbiology** 171 (3-4): 134-142. DOI: 10.1016/j.resmic.2020.01.003
120. Schleper C, Sousa F (2020) News and views: Meet the relatives of our cellular ancestors. **Nature** 577: 478-479. DOI: 10.1038/d41586-020-00039-y
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118. 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.
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115. 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.
114. 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.
113. Bassani F, Zink IA, Pribasniig T, Wolfinger MT, Romagnoli A, Resch A, Schleper C, Bläsi U, La Teana A (2019) Indications for a moonlighting function of translation factor alF5A in the crenarchaeum *Sulfolobus solfataricus*. **RNA Biology** 16(5): 675-685. doi: 10.1080/15476286.2019.1582953.
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106. 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.
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