

9. **Hatzenpichler R***, Scheller S, Tavormina PL, Babin B, Tirrell D, and Orphan VJ*. *In situ visualization of newly synthesized proteins in environmental microbes using amino acid tagging and click chemistry*. Environ Microbiol, 16: 2568-2590 (2014)
▶ **Cover article** ▶ **Discussed in Environ Microbiol “Research Highlight”**
8. Ma L, Kim J, **Hatzenpichler R**, Karymov MA, Hubert N, Hanan IM, Chang EB, and Ismagilov RF. *Gene-targeted microfluidic cultivation validated by isolation of a gut bacterium listed in Human Microbiome Project’s Most Wanted taxa*. Proc Natl Acad Sci USA, 111: 9768–9773 (2014)
7. Lebedeva EV, **Hatzenpichler R**, Pelletier E, Schuster N, Hauzmayer S, Bulaev A, Grigorjeva NV, Galushko A, Schmid M, Palatinsky M, Le Paslier D, Daims H, and Wagner M. *Enrichment and genome sequence of the group I.1a ammonia-oxidizing archaeon “Ca. Nitrosotenuis uzonensis” representing a clade globally distributed in thermal habitats*. PLoS One, 8: e80835 (2013)
6. Spang A, Poehlein A, Offre P, Zumbrägel S, Haider S, Rychlik N, Nowka B, Schmeisser C, Lebedeva E, Rattei T, Böhm C, Schmid M, Galushko A, **Hatzenpichler R**, Weinmaier T, Daniel R, Schleper C, Spieck E, Streit W, and Wagner M. *The genome of the ammonia-oxidizing Candidatus Nitrososphaera gargensis: Insights into metabolic versatility and environmental adaptations*. Environ Microbiol, 14: 3122-3145 (2012)
5. **Hatzenpichler R***. *Diversity, physiology, and niche differentiation of ammonia-oxidizing archaea*. Appl Environ Microbiol, 78: 7501-7510 (2012)
▶ **Review article**
4. Mußmann M, Brito I, Pitcher A, Damsté JS, **Hatzenpichler R**, Richter A, Nielsen JL, Nielsen P H, Müller A, Daims H, Wagner M, and Head IM. *Thaumarchaeotes abundant in refinery nitrifying sludges express amoA but are not obligate autotrophic ammonia oxidizers*. Proc Natl Acad Sci USA, 108: 16771-16776 (2011)
3. Shapiro OH, **Hatzenpichler R***, Buckley DH, Zinder SH, and Orphan VJ. *Multicellular photomagnetotactic bacteria*. Environ Microbiol Rep, 3: 233-238 (2011)
▶ **Chief Editor’s Choice Article 2011**
2. Spang A, **Hatzenpichler R**, Brochier-Armanet C, Rattei T, Tischler P, Spieck E, Streit W, Stahl DA, Wagner M, and Schleper C. *Distinct gene set in two different lineages of ammonia-oxidizing archaea supports the phylum Thaumarchaeota*. Trends Microbiol 18:331-40 (2010)
▶ **Cover article**
1. **Hatzenpichler R**, Lebedeva EV, Spieck E, Stoecker K, Richter A, Daims H, and Wagner M. *A moderately thermophilic ammonia-oxidizing crenarchaeote from a hot spring*. Proc Natl Acad Sci USA, 105: 2134-2139 (2008)

Book chapters (*corresponding author)

3. Marlow JJ and **Hatzenpichler R**. *Assessing metabolic activity at methane seeps: a testing ground for slow-growing environmental systems*. Book chapter in Life at Vents and Seeps. 223-259 (2017)
2. Tavormina PL, **Hatzenpichler R**, McGlynn SE, Chadwick G, Dawson K, Connon S, and Orphan VJ. *Methyloprofundus*. Bergey’s Manual of Systematics of Archaea and Bacteria. John Wiley & Sons, Inc. doi: 10.1002/9781118960608.gbm01414 (2016)
1. **Hatzenpichler R*** and Orphan VJ. *Detection of protein-synthesizing microorganisms in the environment via bioorthogonal non-canonical amino acid tagging (BONCAT)*. Book chapter for *Hydrocarbon and Lipid Microbiology Protocols, Vol. 7: Single-cell and single-molecule methods*. Springer Protocols Handbooks, doi: 10.1007/8623_2015_61 (2015)

In review, in revision, or in preparation (*corresponding author)

6. Murray AE, Freudenstein J, Gribaldo S, **Hatzenpichler R**, Hedlund BP, Hugenholtz P, Kämpfer P, Konstantinidis K, Lane C, Reysenbach A-L, Roselló-Móra R, Parks D, Papke RT, Stott M, Sutcliffe I, Thrash C, Venter F, and Whitman WB. *A roadmap for naming the uncultivated majority*. Nat Microbiol, in review
▶ **Perspective article**
5. Hu D, Cui Y, Markillie LM, Chrisler WB, Wang Q, **Hatzenpichler R**, and Orr G. *Counting mRNA copies in intact bacterial cells by fluctuation localization imaging-based fluorescence in situ hybridization (fliFISH)*. Book chapter for Methods in Molecular Biology, in review
4. Reichart N, Spietz R, Krukenberg V, Parker A, Hatzenpichler R. *In situ activity and substrate utilization of uncultured archaea and bacteria revealed by a “Next Generation Physiology” approach*. Nat Microbiol, in prep.
3. Steward K, Eiler B, Trippett B, Dorle M, Copie V, **Hatzenpichler R***, Bothner B*. *Bioorthogonal non-canonical amino acid tagging has only minor impacts on E. coli’s metabolome*. Front Microbiol, in prep.
2. McFall-Ngai M, **Hatzenpichler R**, Dubelier N. et al. *Oceans of Interactions*, Nat Microbiol, in prep.
▶ **Perspective article**
1. Krukenberg V, Spietz R, Jay Z, **Hatzenpichler R***. *From phenotype to genotype: Next Generation Physiology approaches to studying microbial community function*. Nat Rev Microbiol, in prep.
▶ **Invited review article**

External grant funding**Direct funding to lab as PI: \$2.12M. Total extramural funding raised as PI or Co-PI: \$5.46M**

- NASA Exobiology, \$540k, PI, 2019-2022
- NSF Systems and Synthetic Biology, \$420k, PI, 2018-2021
- NASA Early Career Fellowship Start-up Program for Named Fellows, \$100k, PI, 2018-2020
- Gordon and Betty Moore Foundation, Marine Microbiology Initiative, \$519k, PI, 2018-2020
- MJ Murdock Charitable Trust, \$174k, institutional proposal, PI, 2018-2020
- NSF RII Track-2 FEC, \$1.82M, \$110k to Hatzenpichler, Co-PI, 2017-2021
- NSF Major Research Instrumentation, \$354k, institutional proposal, PI, 2017-2019
- NASA Exobiology, \$431k, PI, 2017-2020

Awarded instrumentation grants**As PI: \$239k; as Co-PI: \$50k (in value)**

- DOE Joint Genome Institute DNA Synthesis Community Science Program, \$50k, Co-PI, 2019-2020
- DOE Environmental Molecular Sciences Laboratory General Cycle, \$50k, PI, 2019
- DOE Joint Genome Institute and Environmental Molecular Sciences Laboratory Facilities Integrating Collaborations for User Science (FICUS) program, \$180k, PI, 2018-2019
- DOE Joint Genome Institute Small Scale Community Science Program, \$9k, 2017-2019

Invited seminars (●, 6) and invited conference/workshop talks (◇, 5) since starting faculty position

- 2019, Center for Ecosystem Science and Society, Northern Arizona University, Flagstaff, AZ
- ◇ 2019, Gordon Research Conference Applied and Environmental Microbiology. South Hadley, MA
- 2019, John Lawrence Seminar, Lawrence Berkeley National Laboratory, Berkeley, CA
- 2018, Department of Microbiology, University of Hamburg, Hamburg, Germany
- ◇ 2018, Engineering the Microbiome workshop, University of Wisconsin. Madison, WI

- ◇ 2018, NSF-HHMI conference on New Opportunities to Study Origins of the Eukaryotic Cell. Howard Hughes Medical Institute, Janelia Research Campus, Ashburn, VA
- 2018, BioTechnology Institute, University of Minnesota, St. Paul, MN
- 2017, Marine Science Institute, The University of Texas at Austin, Austin TX
- ◇ 2017, Annual workshop of the NSF Center for Dark Energy Biosphere Investigations, Marina, CA
- ◇ 2017, Gordon Research Conference on Archaea, Waterville, NH
- 2017, Department of Geosciences, University of Calgary, Calgary, Canada
- **23 invited seminars and 5 invited conference talks prior to starting tenure track faculty position**

Professional service

- **2018-present, Editorial Board Member, The ISME Journal.** Impact factor: 9.52 (2018)
- **2015-present, Associate Editor, *Frontiers in Microbiology, Microbial Physiology and Metabolism.*** Impact factor: 4.08 (2018)
- 2014-2017, member of Junior Advisory Group of the American Society for Microbiology
- 2016, member of General Meeting Planning Committee for *ASM Microbe 2016*, Boston, MA
- 2015-2017, convener of plenary session at the ASM General Meetings in 2015, 2016 and 2017
- **regular ad hoc reviewer for:** Nature Communications, Nature Microbiology, The ISME Journal, FEMS Microbiology Reviews, Environmental Microbiology, Environmental Microbiology Reports, Applied and Environmental Microbiology, Frontiers in Microbiology, FEMS Microbiology Ecology, PLoS One, Microbiology, Scientific Reports, Antonie van Leeuwenhoek Journal of Microbiology, Environmental Science and Technology, mSphere
- **reviewer for grant and fellowship applications** (years as panellist not shown): NASA Exobiology, NSF MRI BIO, NASA Astrobiology Institute, NASA Earth and Space Sciences Graduate Fellowship program, Montana NASA EPSCoR, NSF Biological Oceanography, DOE Joint Genome Institute Community Science Program, DOE Environmental Molecular Sciences Laboratory, French National Research Agency
- 2009, Organizer of the 7th *International workshop on New Techniques In Microbial Ecology* (INTIME7)

Mentoring

- Viola Krukenberg, postdoc, 2017-present; anaerobic carbon-cycling potential of microbes in Guaymas basin sediments through activity-based cell sorting and single cell genomics
- Rachel Lange Spietz, postdoc, 2018-present; 3D organization of metabolically active cells in marine sediments through the lens of bioorthogonal labeling and stable isotope probing
- Mackenzie Lynes, graduate student, 2017-present; diversity and biogeography of uncultured microbes in hot springs of Yellowstone National Park; *in situ* structure-function analyses of hot spring microbes
- Nick Reichart, graduate student, 2017-present; ecophysiology of microbial dark matter in hot springs; developing novel bioorthogonal labeling approaches to identify novel cellulolytic thermophiles
- Anthony Kohtz, graduate student, 2018-present; characterizing the physiology of a novel archaeal lineage in hot springs; development of new click chemistry labeling techniques to identify cells
- George Schaible, graduate student, 2018-present; characterizing the biology of uncultured multicellular magnetotactic bacteria through genomics, *in situ* observation, targeted cultivation, and activity tracing
- William Christian, graduate student, 2019-present; ecology and physiology of microbes responsible for the methane paradox in freshwater systems
- undergraduate researchers working for (x, year) semesters in my lab: Margaret Branine (1, 2016), Juliana Beauchene (1, 2017), Clark Copeland (1, 2018), Michael Dorle (3, 2016-2017), Rylee Green (2, 2017-2018), Michael Laase (1, 2019), Fiona Lewis (1, 2019), Kelli Ober (1, 2019), Berliza Soriano (REU, 1, 2018), Grace Trytten (1, 2017)

Teaching

- BCH 544, Molecular Biology. Class designed for 1st-2nd year graduate students. Taught every fall semester. Typically, 8-12 students from microbiology, biochemistry, molecular biology, virology, chemical and biological engineering, and agricultural sciences
- BCH 380, Biochemistry. Undergraduate level introduction to biochemistry for non-majors, taught every spring semester. Typically, 120-150 students.

Professional memberships

- American Society for Microbiology (ASM)
- International Society for Microbial Ecology (ISME)
- American Geophysical Union (AGU)
- Austrian Scientists and Scholars in North America (ASCINA)