



Postdoctoral Researcher position on Asgard archaea ecophysiology available in the Hatzenpichler Environmental Microbiology Laboratory at Montana State University

The Hatzenpichler Environmental Microbiology Lab at Montana State University (Bozeman, MT) is looking for a postdoctoral researcher to join a collaborative project on the diversity, genomics, physiology, and ultrastructure of Asgard archaea and its implications for eukaryogenesis. This research project is part of an international collaboration between the Hatzenpichler lab and the groups of Brett Baker, Mark Ellisman, and Thijs Ettema. Together, we seek to obtain a comprehensive genetic catalog of Asgard archaea diversity, determine their physiology, and characterize their cellular ultrastructure. To achieve this, we will employ an array of “omics”, physiology, and microscopic approaches. Determining the identity of archaea most closely related to eukaryotes, their physiological interactions, and cellular structure will transform our understanding of eukaryogenesis.

The postdoc will use a combination of cutting-edge next-generation physiology approaches targeted at Asgard archaea physiology and cell-cell (metabolic and physical) interactions. Approaches to be employed include stable isotope probing, substrate analog probing, fluorescence activated cell sorting, Raman micro-spectroscopy, different *in situ* visualization techniques, as well as genome analyses and targeted cultivation. The postdoc’s main objective will be to experimentally test genomic predictions on Asgard archaea physiology and cellular interactions, and (ideal case scenario) obtain an enrichment culture of an Asgard archaeon.

Desired qualifications:

- Ph.D. and a publication record in environmental microbiology, microbial physiology, molecular ecology, or a related field.
- Experience in oligo/poly-nucleotide probe design and application of FISH, CARD-FISH, gene-FISH and/or HCR-FISH to environmental samples.
- Experience in modern experimental microbial ecology techniques, e.g., stable isotope probing, high-throughput cultivation, or functional genomics.
- In-depth knowledge of archaeal physiology and cell biology.
- Excellent written and oral communication skills and excellent command of English.

The position will be available starting September 1st 2020 and will remain open until filled. We are willing to wait for an exceptionally qualified candidate to finish their Ph.D. to start the position. The position is funded for 36 months by the Simons Foundation’s Origin of the Eukaryotic Cell Initiative and includes full benefits. Applicants are asked to submit a CV including a list of publications, a 1-2 page statement on research interests, experience and goals, and the names and contact information of at least two references. Reference letters do not have to be included during initial application but will be requested as needed. Applications will be reviewed as received and will continue until the position is filled. Please send all materials in a single pdf file to roland.hatzenpichler@montana.edu.

To learn more about the Hatzenpichler lab visit www.environmental-microbiology.com.