



12.6.2017

## Postdoctoral researcher in metagenomics and metatranscriptomics of arctic microbial communities

University of Helsinki, The Faculty of Agriculture and Forestry, Division for Microbiology and Biotechnology

The University of Helsinki, founded in 1640, is one of the world's leading universities for multidisciplinary research. The university has an international academic community of 40,000 students and staff members. It operates on four campuses in Helsinki and at 17 other locations. The Faculty of Agriculture and Forestry, located on the Viikki Campus with newly established HiLife center, promotes the sustainable use of natural resources and human wellbeing through scientific research and research-based teaching. The Faculty has 3,200 undergraduate and postgraduate students and employs 500 experts.

A postdoctoral researcher position is available at University of Helsinki in the group of Dr. Jenni Hultman. The position, which is funded by an Academy of Finland highly competitive grant to Jenni Hultman, is offered for a two-year period starting fall 2017. The postdoc will be part of the Molecular Biosciences team <http://www.helsinki.fi/molecular-environmental-biosciences>.

**Project description:** Climate change is affecting the arctic dramatically as the warming is highest in the northern hemispheres. These vulnerable soils store large fraction of earth's carbon which can be released to the atmosphere with warming. Carbon release is largely dependent on microbial responses but we have little understanding on them. Microbial activity represents a hidden variable in geochemical processes involved in greenhouse gas production and utilization. My group will produce novel understanding on these processes. With the utilized microbial ecology methods (metagenomic, metatranscriptomic and metaproteomic analyses together with single-cell sequencing) we will get information on the active microbes and active metabolic pathways in the arctic soils. Specific aim of the project is in revealing the functions of unknown genes and proteins related to GHG production and related nutrient utilization.

**Duties:** The project has a key focus on the development and use of novel metagenomics approaches, allowing detailed understanding of arctic microbial community function and activity.

**Qualifications:** Recent Ph.D. (within the last 4 years) in microbiology, molecular biology, computational biology, bioinformatics, microbial genomics or related fields, and experience in high throughput genomic technologies including metagenomics. Strong understanding in a scripting language (Perl, Python), knowledge of Unix tools and R. Excellent written and oral communication skills.

The application must include contact information for three references, a Curriculum Vitae, a motivation letter (1 page) and a description of your past research with qualifications, skills, and experience relevant to this position (1 page).

For further information about the position contact Jenni Hultman ([jenni.hultman@helsinki.fi](mailto:jenni.hultman@helsinki.fi)).

Please submit your application by 15th of August 2017 to [jenni.hultman@helsinki.fi](mailto:jenni.hultman@helsinki.fi).