

Life at the extremes: microbial EcoGenomics of deep-sea extremophiles

LABORATORY OF MICROBIOLOGY IN EXTREME ENVIRONMENTS

(applications are welcome starting immediately until the position is filled)

The Lab for Microbiology of Extreme Environments (LM2E) in Brest (France) has an 18-month postdoctoral position available to carry out research in the field of deep-sea microbial ecology. We are looking for candidates that would be working on one of the two following projects.

Project 1: Ecology of bacterial and archaeal communities in deep-sea brine lakes and hydrothermal vents systems

Samples from these extreme environments were collected during recent cruises in the Mediterranean Sea and Atlantic Ocean. The postdoctoral fellow will seek to understand the environmental constraints on microbial community structure, with a strong emphasis on thermal, pressure, redox and salinity gradients. The successful candidate will be co-advised by A. Murat Eren at the MBL in Woods Hole to utilize state-of-the-art bioinformatics tools for the analysis of high-throughput sequencing datasets of 16S rRNA amplicons, and shotgun metagenomes.

Project 2: Patterns of gene expressions in model hyperthermophile Archaea

The LM2E hosts a collection of extremophile archaeal isolates from a wide variety of deep-sea environments. The postdoctoral fellow will perform comparative and functional genomics on several strains of Thermococcales with the aim to elucidate mechanisms of stress response and hyperthermophile life style adaptation. He will generate and analyze transcriptomic data from HP/HT bioreactor incubations.

You

We expect you to have previous experience, and/or strong interest in bioinformatics, and statistical analysis of high-throughput sequencing data to study microbial ecology. Besides that, (1) having experience in lab procedures and generating DNA/RNA libraries in order to interact and collaborate with lab technicians, (2) ability to work with UNIX shell and R environment, and/or (3) basic understanding of Python are strengths we are interested in. Ability to travel to the USA for short-term collaborations is also desired.

Us

The LM2E is located on the largest oceanography campus in France, with labs and researchers located both at the University of Western Brittany marine science institute (IUEM) and IFREMER. The postdoctoral researcher will be able to receive strong support/training from biogenouest platforms, most noticeably in Brest and Roscoff, with access to cutting edge computing facilities and bioinformatics environments. For further information on lab activities, please see <http://wwz.ifremer.fr/umr6197>

Please send a CV and a short research statement for either one, or both of the proposed projects to Loïis Maignien (lois.maignien@univ-brest.fr) and A. Murat Eren (meren@mbbl.edu). Position will remain open until it is filled.

International applications are welcome!