



Postdoc in Medical Geobiology at the Globe Institute, Faculty of Health and Medical Sciences, University of Copenhagen

We are offering a 2-year Post doctoral position in medical geology commencing 1st of October 2024 or as soon as possible hereafter.

Our research

You will be hosted by both the molecular geobiology group (Globe) and the Geomicrobiology & Sediment biogeochemistry lab (IGN) and be associated with the evolutionary geobiology consortium. The groups contain an interdisciplinary mix of skills and backgrounds. The combined focus of our work is how surfaces in the environment provide niches for life and act as evolutionary drivers. Your project is part of a consortium grant funded by the Novo Nordisk Foundation where the overall focus is to investigate if surfaces enhance uptake, transfer, and subsequent fixation of extracellular DNA, and if this can lead to increased heritable variation in both nature and the human body. You will be focused on the "in nature" aspects of the research.

Beside horizontal gene transfer, the molecular geobiology group is also working on DNA and protein mineral interaction dynamics with application for the field of sedimentary ancient DNA, archaeology and medical geobiology. The group applies atomic force microscopy and infra-red spectroscopy combined with bulk level approaches to quantify dynamics of biofilm/DNA/protein interactions with environmentally relevant minerals. Beside the PI, the group consists of 3 Post docs (a chemist, a bio-spectroscopist and a microbiologist) and 2 PhD students (a chemist and a biochemist). Collaboration, diversity (in all aspects) and work-life balance are core values in the group. Group statement and more info on our research can be found here: kksand.com

Research in the geomicrobiology & sediment biogeochemistry lab addresses questions related to geobiology and Earth evolution from the past to the present. A large focus is placed on the environmental fate of plastic. Members of the team study the interactions between microorganisms, minerals, and plastics mediated within biogeochemical cycles in water, soil, and sediment at the macro, micro and nanoscale. Besides the PI, the group consists of 2 postdocs, and 5 PhDs. As an academic institute, we typically have 2-3 MSc students pursuing research with the lab at any time. More info at: posthlab.com.

Your job

The aim of this project is to investigate if natural and anthropogenic material surfaces serve as unrecognized hotspots for the observed and alarming distribution of antibiotic resistance genes. We here target materials typically found as debris in aquatic environments (plastics, wood, glass, lignin). You will have a central role in the project and be expected to carry out experiments to investigate biofilm formation on a range of surfaces and conduct horizontal gene transfer experiments. You will also work with cultivation (batch studies) as well as conducting long-term evolution experiments. You will be applying classical microbiological approaches, optical and fluorescent microscopy, and spectroscopic techniques. We aim to use natural competent bacteria, and experience with gene modifications can be beneficial. It will be expected that you can work independently with the mentioned work.

Profile

We are looking for a highly motivated and enthusiastic scientist with the following competencies and experience:

Essential experience and skills:

Application due

6/21/2024

Start date

10/1/2024

Category

Faculty and academic positions

Workplace

Globe Institute

Homepage

<https://globe.ku.dk/>

[Apply for position](#)

- Knowledge of both soil and sediment components
- Knowledge of Plastisphere development

Place of employment

The place of employment is at both

- GLOBE Institute, Section for GeoGenetics, Copenhagen, Faculty of Health and Medical Sciences, University of Copenhagen. We offer creative and stimulating working conditions in dynamic and international research environment. The Sections research facilities include modern laboratories for gene extractions, sequencing and general wet chemistry. The group host a state-of-the-art atomic force microscope and access to fluorescent microscopes and microbiologic lab facilities.
- IGN, Dept of Geosciences & Natural Resource Management, Geology Section, Faculty of Science, University of Copenhagen. IGN houses expertise and facilities for lab and field analysis in geochemistry and geochemical modeling, geomicrobiology, mineralogy, plastic degradation and transport, and biogeochemical processes on a changing planet. Our labs have tools for geochemical, mineral, and sediment analysis and imaging, microbial cultivation, light/fluorescence microscopy, SEM, isotope analysis, and ATR-FTIR.

About Globe Institute

The Globe Institute is part of the Faculty of Health and Medical Sciences at the University of Copenhagen. The Institute's main purpose is to address basic scientific questions through interdisciplinary approaches. The institute operates at the intersection of natural and medical sciences and the humanities. Information on the institute can be found at:

<http://www.globe.ku.dk/>.

The Globe Institute is committed to creating an inclusive and diverse environment where employees and students can belong and thrive. See [website](#) for more information. All qualified applicants will receive full consideration. Candidates who, through their research, teaching, and/or service, contribute to diversity and competencies of our Institute are encouraged to apply. The University of Copenhagen strives to offer a family friendly and flexible working environment with a sustainable balance between work- and private life, including parental leave schemes (up to 47 weeks for both parents) and up to six weeks of paid holidays per year. Researchers that have not been tax liable in Denmark for the last 10 years can apply for a special (reduced) tax scheme. The university offers a variety of services for international researchers and accompanying families.

Terms of employment

The average weekly working hours are 37 hours per week.

The position is a fixed-term position limited to a period of 2 (two) years. The starting date is on 1st of October 2024 [or after agreement].

Salary, pension and other conditions of employment are set in accordance with the Agreement between the Ministry of Taxation and AC (Danish Confederation of Professional Associations) or other relevant organisation. Currently, the monthly salary starts at 38,500 DKK/approx. 5,100 EUR (April 2024 level). Depending on qualifications, a supplement may be negotiated. The employer will pay an additional 17.1 % to your pension fund.

Foreign and Danish applicants may be eligible for tax reductions, if they hold a PhD degree and have not lived in Denmark the last 10 years.

The position is covered by the Job Structure for Academic Staff at Universities 2020.

Questions

For further information please contact Karina Krarup Sand, kks@sund.ku.dk ; www.sund.ku.dk

For further information please contact Nicole Posth nrep@ign.ku.dk ; www.ign.ku.dk

Foreign applicants may find this link useful: www.ism.ku.dk (International Staff Mobility).

We reserve the right not to consider material received after the deadline, and not to consider applications that do not live up to the abovementioned requirements.

The further process

After the expiry of the deadline for applications, the authorized recruitment manager selects applicants for assessment on the advice of the hiring committee. All applicants are then immediately notified whether their application has been passed for assessment by an unbiased assessor. Once the assessment work has been completed each applicant has the opportunity to comment on the part of the assessment that relates to the applicant him/herself.

You can read about the recruitment process at <http://employment.ku.dk/faculty/recruitment-process/>

The applicant will be assessed according to the Ministerial Order no. 242 of 13 March 2012 on the Appointment of Academic Staff at Universities.

The University of Copenhagen wish to reflect the diversity of society and encourage all qualified candidates to apply regardless of personal background.

Part of the International Alliance of Research Universities (IARU), and among Europe's top-ranking universities, the University of Copenhagen promotes research and teaching of the highest international standard. Rich in tradition and modern in outlook, the University gives students and staff the opportunity to cultivate their talent in an ambitious and informal environment. An effective organisation – with good working conditions and a collaborative work culture – creates the ideal framework for a successful academic career.