



**Norwegian University
of Life Sciences**

Jobb Norge-ID: 104024

Søknadsfrist: Closed

Nettside:

Omfang:

Varighet:

PhD scholarship within bioinformatics - gene expression analysis - omics - ref.no. 14/03501

At Department of Basic Sciences and Aquatic Medicine, a PhD student position within Bioinformatics - Gene Expression Analysis - *Omics* is available from September 15, 2014-September 14, 2017.

Section for biochemistry and physiology at Department of Basic Science and Aquatic Medicine at Campus Adamstuen has 5 scientific staff and 3 technicians. Main activities are teaching biochemistry, cell biology and physiology. The research is focused on (1) biological effects on radiation and other environmental factors using zebrafish and gene expression control mechanism analyses (this advertised position; CoE CERAD), neurodegenerative disorders with focus on scrapie and (3) fish reproduction physiology. The work will mainly be carried out at Campus Adamstuen.

The research team Aleström Lab / CERAD Partner NMBU Vetbio well documented experience and competence in the use of zebrafish as model species as well as within the PhD project field of research (<http://zebrafish.no>).

Research project

The PhD project will be part of Center for Environmental Radiation (CERAD 2013-2022; <http://www.nmbu.no/cerad>), an NMBU Centre of Excellence. CERAD's core objective is to provide the scientific basis for impact and risk assessments, which underpin management of radiation risks in combination with interacting stressors. The scope includes man-made and natural environmental radioactivity from existing situations, as well as understanding possibilities for new events and their consequences. The research group CERAD Partner NMBU Vetbio has competence within veterinary medicine, environmental toxicology, reproduction physiology, biochemistry/molecular biology/global transcriptomics and epigenomics. The group has long experience from using the zebrafish model (<http://zebrafish.no>).

The candidate will work on a project as part of the CERAD research umbrella, with focus on bioinformatic analyses of gene expression profiles and epigenetic marks, aiming at characterisation of biological effects from exposures to low chronic doses of radioactive radiation alone or together with other environmental stressors.

The aim of the project is to map effects on the transcriptome and epigenome (changes in DNAm, chromatin structure, ncRNA) to be compared with endpoints related to demographic parameters, reproduction and behaviour. Subgoals are to

- map transgenerational effects of exposures
- use bioinformatic tools to describe molecular mechanisms and potential biomarkers
- if time permits, design and development of transgenic biomonitor fish with CERAD relevant reporter genes will be initiated.

Title of PhD project: "Transgenerational effects of low dose gamma radiation on transcriptomic and epigenomic profiles in zebrafish".

Main tasks

Work tasks will focus on achievement of competence within bioinformatics and establishment of a bioinformatics pipeline for analyses of gene expression profiles and epigenetic marker landscapes (transcriptomics, epigenomics) from large datasets generated by genome wide sequencing. Participation in CoE CERAD will open for participation in bioinformatics related experimental design and analyses within other parts of the great project.

It is assumed that the selected candidate participates in an approved ph.d-program with the goal to fulfil the PhD degree within the period September 15, 2014-September 14, 2017.

Academic qualifications

The applicant must document expertise and interest in the research subject. Applications will be evaluated according to the following criteria:

Required:

- Cand.Med.Vet, Cand.Scient, M.Sc. or equivalent
- Documented skills in molecular biology, genetic engineering
- Skills from use of computer programs
- Documented skills in both written and spoken English

Desired:

- Transcriptomics, epigenomics, next-generation sequencing

- Skills in mathematics/statistics
- Knowledge from bioinformatics
- Experience from Linux software

Personal qualities

Required:

- Motivation for research
- Independent and taking initiatives
- Social intelligence and team player

Desired:

- Flexibility, hard working and adaptability
- Good mood

NMBU offers:

- An optimistic academic institution that is on the offensive and with focus on professional development, dissemination and competence.
- An interdisciplinary and inclusive environment that provides exciting research- and development opportunities.
- Daily contact with inspiring students and skilled colleagues.
- Various welfare schemes.
- Beautiful surroundings just outside Oslo.

Remuneration

The salary for PhD-scholarship start at wage grade 50 (equivalent to annual salary 421 100 NOK) on the Norwegian Government salary scale upon employment and follow ordinary meriting regulations.

For especially well-qualified applicants, alternative salary placement could be considered.

Employment is conducted according to national guidelines for University and Technical College PhD scholars.

Further information

For further information, please contact Professor Peter Aleström, main supervisor. Phone: +47 22964571 or +47 92448644, e-mail: peter.alestrom@nmbu.no

Application

To apply online for this vacancy, please click on the '**Apply for this job**' button above. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Application deadline: August 20th, 2014

Applications should include (electronically) a letter of intent, curriculum vitae, full publication list, copies of degree certificates and transcripts of academic records (all certified), and a list of two persons who may act as references (with phone numbers and e-mail addresses). Publications should be included electronically within the application deadline.

Printed material which cannot be sent electronically should be sent by surface mail to Norwegian University of Life Sciences, Department of Basic Sciences and Aquatic Medicine, P.O. Box 5003, NO-1432 Ås, within August 20th, 2014. Please quote reference number 14/03501

If it is difficult to judge the applicant's contribution for publications with multiple authors, a short description of the applicant's contribution must be included.

A compulsory contribution of 2 % is made to the Norwegian Public Service Pension Fund. A good working environment is characterized by diversity. We encourage qualified candidates to apply, irrespective of gender, physical ability or cultural background. The workplace will if necessary be facilitated for persons with disabilities.

According to the Freedom of Information Act § 25 the list of applicants for this position may be made public irrespective of whether the applicant has requested that his/her name be withheld.

Tilleggsinformasjon

Arbeidssted: