



Norges miljø- og  
biovitenskapelige  
universitet

Jobbnorge-ID: 116429

Søknadsfrist: Avslutta

Nettside:

Omfang:

Varighet:

## PhD scholarship within Environmental Radioactivity/Radioecology - ref.no 15/02414

At the Department of Environmental Sciences (IMV) and the Center of Environmental Radioactivity (CERAD) a 3 year Ph.D-position is available within environmental radioactivity/radioecology. The research is focused on biological effects and tolerance to chronic gamma irradiation in nematodes (*C. elegans*), also in combination with other stressors.

IMV has about 80 employees, including permanent and temporary scientific positions, PhD students, post doctors, technicians and administrative positions. The Department is organized into four scientific groups/sections; Environmental Chemistry, Geology, Hydrology and Limnology and Soil Sciences. The PhD will also be included in the IMV/Environmental Chemistry group/Isotope Laboratory research. See [www.nmbu.imv.no](http://www.nmbu.imv.no).

In 2013 the CERAD Center of Excellence was established at IMV/Isotope Laboratory in collaboration with NRPA, MET, NIVA and NIPH. CERAD is focusing on new scientific knowledge and tools for better protection of people and the environment from harmful effects of radiation. See more information on <http://cerad.nmbu.no/>

### Research project

Within CERAD, the research focuses on eight key research areas, where Radiosensitivity - Why are some organisms more sensitive to radiation than others - and MixTox - effects of combined exposures - representing the scientific fundament for the present project.

The PhD project aims to identify biological effects of gamma irradiation as well as protective mechanisms at a cellular and molecular level in exposed *C. elegans*. Using state of the art technologies, biological responses in *C. elegans* will be characterized. This includes assessing effects at population, individual, cellular, molecular and genetic levels. An important task will be to study the interactions between ROS formation, oxidative stress, protein and lipid damage, genotoxic effects, reproduction effects and cellular defense mechanisms.

CERAD has a large national and international network, including several EU projects in Radioecology. The PhD student will be part of the CERAD consortium where each partner institution provides expertise on different aspects and methodologies. The PhD work will also be part of national and international project collaboration.

### Main tasks

#### The work will include

- Studies of adverse biological effects of chronic gamma irradiation of *C. elegans*
- Investigation of oxidative stress and genotoxic effects, reproduction effects and protective mechanisms to chronic gamma exposed *C. elegans*
- Identification of gene regulatory and proteomic responses of gamma exposed *C. elegans*
- Investigation of radiosensitivity candidate genes by exposing mutants to gamma radiation
- Investigation of MixTox effects of gamma radiation exposure in combinations with selected metals

In collaboration with supervisors, the successful candidate is expected to prepare a work and research plan for the PhD scholarship period within the first few months of the appointment. Work will be part of a team of researchers, doctoral fellows and graduate students in the Department of Environmental Sciences and together with international partners. Visits to institutions abroad must be expected.

### Qualifications

The successful applicant must have a MS degree in radioecology, molecular biology or in ecotoxicology, which is preferably obtained within the last 5 years.

The applicant should have experience with relevant molecular methods. Experience in bioinformatics would be beneficial. Experience from work with *C. elegans* or similar model organisms as well as with ionizing radiation or radionuclides is an advantage. For candidates without competence within radiation, the Radiation protection course KJM350 will be mandatory

Applications will be evaluated according to the following criteria:

- The grades on MSc degree work.
- Competence in molecular methods.
- Experience within ecotoxicology/radioecology.
- Experience with *C. elegans* or similar model organisms.

- Experience with ionizing radiation and radionuclides.
- Experience with genomics and bioinformatics.
- Dissemination skills.

In addition the candidate must have:

- Good knowledge of the English language - both written and oral.
- Good communication skills, both related to research and presentations in general.

### Personal qualities

Personal characteristics important for the position are:

- Strong motivation
- Creativity and ability to work result-oriented, accurate and structured.
- Analytical ability, ability to work independently as well as ability to be a good team player.

### NMBU offers:

- A progressive and ambitious academic institution with a focus on professional development, dissemination and competence.
- An interdisciplinary and inclusive environment that provides exciting research- and development opportunities.
- Inspiration through daily contact with 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 430 500 NOK) on the Norwegian Government salary scale upon employment and follow ordinary meriting regulations.

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

### Further information

For further information, please contact Dr Dag Anders Brede

E-mail: [dag.anders.brede@nmbu.no](mailto:dag.anders.brede@nmbu.no) ; phone+ 47 67231873.

### 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: 27.09.2015

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 Environmental Science, P.O. Box 5003, NO-1432 Ås, within 27.09.2015. Please quote reference number 15/02414.

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: