Norwegian University of Life Sciences

Jobbnorge-ID: 153504
Søknadsfrist: Avsluttet
Nettside:
Omfang:
Varighet:

PhD scholarship in Plant Biotechnology - Gene editing - Ref. no 18/03246

The Department of Plant Sciences, Faculty for Biosciences at the Norwegian University of Life Sciences (NMBU) has a vacant 3 year PhD-position in Plant Biotechnology - Gene editing. The position is associated with the research project GENEinnovate (Gene Editing to Innovate Norwegian Breeding Industries) in close collaboration with the Norwegian plant breeding company Graminor.

The Faculty of Biosciences is organized in two departments: Department of Animal- and Aquacultural Sciences and Department of Plant Sciences. The main objective of the Faculty of Biosciences is to contribute to the development of sustainable agriculture and food production systems through basic and applied research on plants and animals including fish (aquaculture). The research is organized in the following groups: Animal Nutrition, Animal Breeding and Quantitative Genetics, Systems Genetics and Bioinformatics, Ethology and Animal Environment, Agroecology, Genetics and Plant Breeding, Food Crops, Plant Biology and Biotechnology, and Plant Protection.

The faculty also houses Centre for Integrative Genetics (CIGENE) and a Centre for Research-based Innovation (SFI) - Foods of Norway. The faculty is responsible for bachelor- and master programmes in Biology, Animal Science and Plant Science, and international master programmes in Agroecology, Plant Science, Aquaculture, Animal Breeding and Genetics and Feed Manufacturing Technology. PhD programmes include Animal Science and Aquaculture, and Plant Sciences. There are currently 480 bachelor and master students, and 90 PhD students, enrolled in these programmes.

The faculty has approximately 220 permanent and temporary scientific employees, including technicians, and 18 administrative positions.

Research project
GENEinnovate is a 4-year Innovation Project funded 50/50 by industry partners and the Research Council of Norway. The industrial partners in GENEinnovate are Norsvin (norsvin.no) (project leader), Geno (www.geno.no), AquaGen (aquagen.no) and Graminor (www.graminor.no). Public sector partners are the Faculty for Biosciences (BIOVIT), NMBU and The Norwegian Biotechnology Advisory Board. This project offers an opportunity to work in a larger group of scientists and industry partners on the same topic; gene editing by CRISPR, with the goal to establish gene editing technology in pigs, cattle, fish and plants. There will be a Work Package (WP) as a common toolbox facility at CIGENE, a mutually benefiting WP on social aspects of gene editing, as well as WPs on each group of organisms with their own specific goals. The project leader at NMBU is Dr. Matthew Kent (CIGENE, Department of Animal and Aquacultural Sciences) and the project leader at NMBU for the plant WP is Professor Trine Hvoslef-Eide (Department of Plant Sciences). Late blight (*Phytophtora infestans*) causes serious damage in our cold and wet climate in Norway and currently no variety with complete resistance to this fungal disease is available. Norwegian farmers depend upon multiple fungicide applications every season and potato has therefore the highest use of fungicides with a value of <75 million NOK/year for preventive measures. Gene editing offers interesting opportunities for providing Norwegian varieties with endogenous resistance, or less susceptibility, to this fatal disease.

Main tasks

- Establish gene editing tools and methods NMBU and Norwegian potato breeding at Graminor Make CRISPR constructs for editing susceptibility and resistance genes for late blight (*Phytophtora infestans)*
- Screen edited plants and participate in testing in controlled growth chambers and in the field (if permitted)
- Participate in teaching in biotechnology, with the time used for this added to the period of employment

The successful candidate is expected to enter a plan for the progress of the work towards a PhD degree during the first months of the appointment, with a view to completing a doctorate within the PhD scholarship period.

Academic qualifications
The successful applicant must meet the conditions defined for admission to a PhD programme at NMBU. The applicant must have an academically relevant education corresponding to a five-year Norwegian degree programme, where 120 credits are at master's degree level. The applicant must have a documented strong academic background from previous studies, and be able to document proficiency in both written and oral English. For more detailed information on the admission criteria please see the PhD Regulations and the relevant PhD programme description.
The applicant must document expertise and interest in the research subject.

Required academic qualifications

- Master degree within plant biotechnology
- Knowledge in general molecular techniques
- Confirmed knowledge of gene editing

- Experience with electrophoresis for gene transfer to plants
- Experience with ddPCR for screening edited plants

Desired academic qualifications

- Knowledge in bioinformatics and software tools
- Experience with growing plants in greenhouses

Personal skills
Required personal skills

- Ability for independent work displaying initiative and careful creative thought
- Analytical academic approach to research questions
- Accurate experimental skills
- Good communication skills
- Socially adaptable
- Goal oriented and hard working
- Applicants must be proficient in English, both written and spoken

Desired personal skills

- Proficiency in Norwegian is advantageous

NMBU offers:

- 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.
- Possibility of a place in a private kindergarten

Remuneration
The position is placed in government pay scale position code 1017 (PhD Fellow), wage framework 20.7 (salary grade 51). PhD Fellows are normally assigned pay grade 51 (NOK 443.900,-) 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 Professor Trine Hvoslef-Eide
E-mail: trine.hvoslef-eide@nmbu.no; phone +47 67 23 27 60 M. +47 93 43 37 75

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: 15.06.2018

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. The relevant NMBU Department may require further documentation, e.g. proof of English proficiency.
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: