Norwegian University of Life Sciences

Jobbnorge ID: 281046
Deadline: 6/9/2025
Website: http://www.nmbu.no
Scope: Fulltime
Duration: Fixed Term

Passionate about fish nutrition and health? Join us for a PhD on novel microbial feed ingredients!

PhD position in Fish Nutrition and Health - Novel Microbial Feed Ingredients

About the position

PhD Position in Fish Nutrition and Health - Novel Microbial Feed Ingredients

The **Department of Animal and Aquacultural Sciences**, Faculty of Biosciences at the Norwegian University of Life Sciences (NMBU), has a **vacant 3-year PhD position** in **fish nutrition and health**, with the possibility of a one-year extension. The position is internally funded by NMBU and is linked to the **ForestFeed project**, which is part of the **Bioeconomy in the North** program.

This exciting PhD opportunity is at the forefront of sustainable aquaculture research, aiming to develop and validate a microbial feed ingredients PEKILO® (Paecilomyces variotii) derived from forestry side-streams. The successful candidate will focus on evaluating growth responses, health effects, and robustness in Atlantic salmon fed these novel ingredients. Additionally, the research will include in vitro screening of bioactive compounds in salmonid cell cultures to assess their immunomodulatory properties.

This project will involve advanced biochemical, molecular, and immunological analyses to uncover the health benefits of bioactive compounds such as β-glucans, nucleotides, and spermidine in PEKILO®, a promising novel feed ingredient developed by Enifer.

The findings from this PhD will contribute to enhancing fish immune health, reducing disease-related mortality, and shaping future product development for sustainable aquafeeds.

The PhD candidate will join a multidisciplinary research team at NMBU, working at state-of-the-art fish nutrition and health facilities, including well-equipped wet labs and large-scale experimental fish units. This is a unique opportunity to contribute to cutting-edge research in sustainable aquaculture while building expertise in microbial biotechnology, fish physiology, and immunology.

Are you ready to make a real impact on the future of aquaculture? Join us in developing the next generation of sustainable fish feeds!

The applicant is made aware that an application for a PhD position at NMBU is at the same time an application for admission to a PhD program at the institution. The documentation that is necessary to ensure that the admission requirements are met must be uploaded as an attachment.

Main tasks

- Perform in vitro salmonid cell culture experiments.
- Perform flow cytometry and cell sorting to immune-phenotype PEKILO®-responsive cell populations.
- Participate in in vivo salmon experiments.
- Study the impact of novel microbial feed ingredients on fish performance and health, using state-of-the-art tools (including ELISA, transcriptomics, proteomics, gut microbiome analyses, and other nutrigenomic tools).
- Process and perform statistical and bioinformatic analysis of data.
- Generate scientific publications.

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. The compulsory training for the PhD degree at NMBU is covering a minimum of 30 ECTS credits. Presentation of findings at international conferences or/and attending international workshops or courses are highly encouraged and financially supported.

Mobility: The PhD candidate is encouraged to spend time abroad as a part of the work related to the doctoral theses.

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We have compiled a deliberation for this position.

Competence

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 Master's degree or a cand. med. vet. degree, with a learning outcome corresponding to the descriptions in the Norwegian Qualification Framework, second cycle (Master degree). The applicant must have a

documented strong academic background relevant to the position 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

- A MSc degree or equivalent in aquaculture nutrition. Candidates from other disciplines e.g. animal, veterinary, or molecular sciences will also be considered.
- Experience with molecular laboratory techniques
- Applicants need to be fluent in English, both orally and written.

The following experiences and skills will be emphasized:

- Hands-on experience with cell cultivation.
- Hands-on experience with handling and dissection of fish/animals.
- Hands-on experience with state-of-the-art omics techniques (e.g., transcriptomics, proteomics).
- Knowledge in statistical analyses of biological data and application of bioinformatic tools.

Personal suitability will be emphasized.

Requirements:

- Strong communication and organizational skills to collaborate effectively in a multidisciplinary team.
- Ability to work independently while ensuring progress and deliverables according to contract.
- Structured and reliable work routines.
- High motivation and commitment to the role.

Desirable qualifications:

- Creativity and openness to exploring new methodologies in the research field.
- Experience with interdisciplinary collaboration.
- We value good teamwork, and the ability to contribute positively to a collaborative work environment is essential.

Remuneration and further information

The position is placed in government pay scale position code 1017 PhD Fellow. PhD fellows normally start at a yearly salary of 536 200 NOK upon employment and follow ordinary meriting qualifications.

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

For further information, please contact Prof. Margareth Øverland, Professor in aquaculture nutrition, +47 95109628

Information for PhD applicants and general information to applicants

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: 09.06.2025

Your CV must be entered in JobbNorge's CV form and not just included as an attachment. This is to be able to comply with the regulations of §15 of the Public Administration Act.

In the application, the candidate must confirm that information and documentation (in the form of attachments) submitted via the job application can also be used by NMBU in a possible admission process.

Applicants invited for an interview are expected to present original diplomas and certificates.

The following documents must be attached to the application:

- Motivation letter (maximum 1 page)
- Complete CV
- Certified copies of academic diplomas and certificates. (i.e. Diploma, transcript. Diploma supplement for both bachelor and master). Diplomas, transcripts and diploma supplements that are not in Norwegian or English must be uploaded in the original language. An English translation of these documents must also be attached.
- Applicants from universities outside Norway are kindly requested to send a diploma supplement, or a similar document, which describes in detail the study program and grading system.
- Documentation of proficiency in written and oral English in accordance with NMBU PhD regulation section 5-2 (3).
- Names and contact details for two references
- Additional relevant documentation of professional knowledge (for example, list of scientific works). 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.

About The Faculty of Biosciences

The Faculty of Biosciences (BIOVIT) aims to shape the future of food and bioproduction through teaching and research in biology and sustainable production and use of plants, livestock and fish. The faculty has a large project portfolio and an annual turnover of approximately NOK 250 million.

BIOVIT is organized into seven research groups: Genome Biology, Breeding, Genetics and Food Production Systems, Ruminant Nutrition and Physiology, Ethology and Animal Welfare, Nutrition and Physiology for Monogastric Animals, Plant Biology, Sustainable Food Systems and Integrated Plant Protection, and Genetics, Evolution and Sustainable Plant Production. Additionally, the faculty has seven research support and laboratory units.

BIOVIT is responsible for bachelor's and master's programs in aquaculture, biology, animal science, and plant science, as well as English-language master's programs in Agroecology, Plant Sciences, Feed Manufacturing Technology, and Genome Sciences. BIOVIT also offers Ph.D. programs in animal science and plant science. Currently, the faculty has about 550 bachelor's and master's students and 90 Ph.D. students. BIOVIT employs approximately 230 staff members and has its own faculty administration.

The Norwegian University of Life Sciences (NMBU)

NMBU will contribute to securing the future of life through outstanding research, education, communication and innovation. We have the country's most satisfied university students, who receive research-based education in a unique student environment. Our graduates gain a high level of competence in interdisciplinary collaboration and are popular in the labor market.

NMBU has internationally leading research environments in several subjects. Together with our partners in society and business, we contribute to solving some of the biggest societal challenges of our time. We focus on innovation, communication and entrepreneurship because we believe these challenges are best solved with joint efforts. We believe that a good working environment is characterized by diversity.If necessary, workplace adaptations will be made for persons with disabilities. More information about NMBU is available at www.nmbu.no/en

Additional information

Contact person:

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Place of service:

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